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SOME MISGIVINGS CONCERNING CURRENT IDEAS ON CURRICULUM CONSTRUCTION

Curriculum construction is one of the most crucial problems confronting educational leaders. The literature is flooded with articles dealing with the subject. Administrators plan a curriculum, principals overthrow it, supervisors disregard it, teachers criticize it. Educational organizations and associations are making elaborate research studies relating to it: expert students of education are attempting to apply the findings of scientific investigations from many fields to the technique of curriculum building. More than one hundred books and articles dealing with some phase of the curriculum have appeared since 1920. Every town, every city, every state, yes, every school has its own peculiar problems, many of which involve the course of study.

This universal and concentrated activity toward the remaking of the curriculum is due to a number of factors. The changing social, economic, and industrial conditions, which have broadened the scope of the school and stressed the importance of preparation for life, for economic and social efficiency; the great progress of the testing movement, revealing, among other things, that the superior and inferior children need special courses of study adapted to their needs; the clamor raised by many parents and educators for some form of religious instruction hitherto not provided for in the public schools; the growing dissatisfaction with the entire present organization of the school system—all of these factors, together with many others, have not only given great stimulus to the movement but have likewise rendered the problem all the more complicated.

In the literature that has accumulated about the topic in recent years one can easily discern that a method of attacking

the problem is beginning to take shape. A technique of curriculum building is being gradually developed. It is a science in itself. One of the most widely advocated methods of research relating to the curriculum is what is known as "Job Analysis," or, to use a more scientific and dignified term, "Functional Analysis." The aim of job analysis is to make an intensive study of the life situations of thousands of individuals, to make a survey of the most minute details of their every-day lives, in order to discover what are the duties and problems which individuals are likely to meet with in life, and use this data as the basis for the reconstruction of the course of study. We are told that, if we discover what are the needs of individuals in their various occupations and duties of life, we thereby, *ipso facto*, discover the educational objectives. With these objectives once determined, it is a comparatively easy matter to readjust the curriculum in such a way as to contribute the maximum efficiency in preparing the individual to meet those needs.

This sounds plausible, doesn't it? Why should we not use it? Did not Leonard Ayers and a number of other investigators employ this method with wonderful success in determining the most frequently used words in the English language, thereby providing the minimum essentials in spelling? Was not Wilson equally fortunate in using this method to determine the content of arithmetic? Then why not profit by the pioneer work of others? All that we need to do is to make an intensive survey of thousands of individuals, to get into close contact with their every-day lives, to discover how they live; what food they eat, and how they prepare it; what quality of clothes they wear and what per cent of their annual income they spend upon it; what kind of houses they live in, whether tenement or privately owned; what make automobile they drive and how much gasoline they use per month; what amusements they indulge in during their leisure hours; what books and papers they read; what occupations they follow and what special abilities are required for these occupations. Assemble all this data, and lo, with the touch of a magic wand, the problem is solved! How simple it all seems. Job analysis has already secured a large following and is still gaining ground. The reason for this is the fact that this movement seems to offer certain inducements. First, it presents a good opportunity to break away from all the traditions of the past. Traditions are static and paralyze progress. Breaking

away from the past, because it is traditional, is characteristic of the present age. Moreover, this movement proposes to discover just what elements are needed in order to prepare for life: it promises to bring education into closer relation with life itself. Finally, it gives the appearance of being scientific. It is research. Any kind of research masquerades under the name of science. Hence, it is quite natural that this movement should have become popular; it would have been surprising had it been otherwise.

Before accepting this whole movement at its face value, in the enthusiastic stage of its infancy, it is highly important to investigate its tendencies and discover, if possible, any underlying fallacies. I will attempt to show:

1. That this movement, as now advocated and used, is unscientific and subjective.

2. That it is based on psychological theories not supported by experimental evidence.

3. That the philosophy of education underlying the whole procedure is materialistic and unsound.

4. That statistical methods have been *misused* and that there are certain *limitations* to statistical methods which have not been kept in mind.

5. That this method may be used successfully only when a certain *control* is exercised over the research, and when it is *directed* toward specific goals that are *related* to the *work of the school.*

1. THIS METHOD, AS ADVOCATED AND USED, IS UNSCIENTIFIC AND SUBJECTIVE

The pseudonym "scientific" is often prefixed to "job analysis." Scientific methods, as modern science accepts the term, not only imply *objective* methods but often substitute the latter for the former. They are practically synonymous as far as modern science is concerned. But job analysis, although proposing to undertake vast surveys and studies, is nevertheless far from being *objective.* Dr. Bobbit, in his book, "How To Make a Curriculum," states:

> When we know what men and women ought to do along many lines and levels of human experience, then we shall have before us the things for which they should be trained. The first task is to discover the activities which ought to make up the lives of men and women; and along with these, the abilities and personal qualities for their proper performance. These are the

educational objectives. . . . It is probable that the general community should assist in determining the several abilities which are to be developed within the younger generation.

And farther on he continues: "Religious workers ought to be able to advise with reference to desirable religious attitudes, habits, characteristics, and abilities." He tells us, for example, that, "according to the common judgment of thoughtful men and women, it is desirable to cultivate the disposition to obey the laws, to recognize obligation, to hold high ideals and standards, and to do one's best."

What does all this mean? Is the sense of duty or obligation to be reduced to the will of the mob? Is mob morality to be our standard? Does every one decide for himself what constitutes high ideals and doing one's best? Or does the mob decide for us? Is this objective? Is this scientific? Suppose, for example, that, "according to the common judgment of thoughtful men," birth control be considered a social virtue (not an impossible supposition at the present time), does that judgment make it such? Is this social virtue to be taught in school because the mob has declared that it is one of the virtues that society needs? Or, again, suppose, that "according to the common judgment of thoughtful men" attendance at Sunday religious services be considered a useless waste of time and energy. What then? Are religious duties, habits, and attitudes to be determined by the masses? Russia is a splendid example of what will happen when, "according to the common judgment of thoughtful men, it is" *not* "desirable to cultivate the disposition to obey the laws," *not* "to recognize obligation," and *not* "to hold high ideals and standards."

Dr. S. A. Courtis makes the following observation regarding this method:

When we ourselves do not believe in an objective selected wholly on the basis of opinion, we call it superstition, but when we ourselves do the selecting, we give common sense a sufficient justification for our choice.

2. PSYCHOLOGICAL THEORIES NOT SUPPORTED BY EXPERIMENTAL EVIDENCE

This whole movement is based on psychological theories that have not stood the test of experimental research. It rests on the present theories of mental organization and disorganization which have rejected the faculty psychology. According to the

non-focal theory or theory of mental disorganization, there are no faculties to be trained. "There is no one memory," writes Thorndike, "to hold in a uniformly tight or loose grip all the experiences of the past. There are only the particular connections between particular mental events and others, sometimes resulting in great surety of revival, sometimes in little." Now, if there are no faculties to be trained, then the natural thing to do is to look *outward* and not *inward* for our objectives. This is exactly what job analysis seeks to do. The purpose of education is not the training of the faculties, but training for the various activities that are necessary for social life. If this view is correct, then it is only necessary to discover all the activities in which man is likely to be engaged during life, and make a distinct effort to train the individual in those abilities required for those special activities. Dr. Bobbit lists no less than 550 abilities. A more recent writer gives forty pages of such abilities. A cursory glance through these forty pages of abilities and objectives readily convinces one that the job of scientific research has only begun. No doubt thousands of such objectives will be discovered in future studies and surveys. We will find that an individual must know how "to hang doors, repair broken chairs, apply fertilizer, exterminate ants, bedbugs, cockroaches, flies, rats and mice; that he must know how to hang curtains, fix a broken gutter, install a sewage system, grease leather bags with vaseline to prevent them from drying out; clean paint brushes; mix paints; repair an inner tube"—that he must perform thousands of similar and dissimilar activities.

When this list of activities is complete (which can never happen as long as social, economic and industrial conditions are changing), educators must devise a special technique for training each of those special abilities. They dare not aim at developing, for example, a *general mechanical ability*. This would not be consistent with the non-focal theory. The fact that man knows how to repair the broken leg of a chair is not a guarantee that he is able to build a wooden box. Each of these is a special ability that requires a special type of training. Perhaps, this sounds somewhat farfetched. But it cannot be denied that the theory of Thorndike approaches very near to an atomistic theory of mind. It is a theory that mind is merely a collection of a vast number of extremely minute functions, each of which is complete in itself, although there may be some slight relationship to others.

He writes: "Almost any, if not any, one thing in the mind may happen in partial independence of almost any, if not any other thing." He holds that "the mind is a host of highly particularized and independent abilities." He stresses the independence of these innumerable mental processes.

Dr. Bobbit and others substitute abilities for the old-time faculties. In the older doctrine, abilities were divided into two classes, those which pertained to the body, consisting of mechanical and motor skills, and those which pertained to the mind—for example, ability to reason or to remember. In the selection of activities and abilities, as job analysis implies, the question inevitably arises as to the extent to which it is possible, if at all, to train general abilities. There is no escape from a dilemma. Either we must admit that there are general abilities that admit of training or there are no faculties, but rather a multitudinous number of separate abilities, and then we are confronted with the problem of training an individual in all of these specific abilities during the comparatively short period of school life. If we admit the former, then why all the detail demanded by job analysis? If we admit the latter, then education is a hopeless, impossible task; education must forever bring up the rear; it must forever lag many years behind job analysis.

Dr. Bobbit does not seem to have scented the issue above. In some instances, his list of abilities enumerates distinct mechanical abilities. For example, instead of providing for a *general* ability to handle tools, he lists such skills as putting up shelving, putting on doorknobs, renewing washers in faucets, gluing, soldering, joining electric wires, insulating wires, keeping the clocks wound, etc. But at other times the abilities listed rival the faculties in generalities. We find listed, for example, "the ability to protect one's self from social, economic, and political fallacies; a *general* dislike for things cheap, careless, or tawdry; the disposition to do one's best whatever the circumstances." In other words, it seems entirely arbitrary to him, in the case of any new activity, whether it be assigned to a new ability or placed in some category with old ones. There is an evident lack of consistency. It certainly does make a difference, however, in the training of these abilities, whether we consider each one an entirely separate ability or merely one of a class. Make the ability specific enough, and it becomes automatically converted into a habit. Make the ability general, and the

method of training will be different whilst the emphasis will shift to some other point. If, for example, we should undertake to train an individual to use the typewriter, we would rely chiefly on drill. If, on the other hand, we were to undertake to teach an individual how to write excellent business letters, we would adopt an entirely different method of procedure. What is the position of Dr. Bobbit and other exponents of job analysis in this matter?

Fortunately, experimental evidence can be adduced showing that there is a general memory, a general power of perception, and a general attention. In the light of this evidence, there is reason to believe that future research will establish the existence of other general abilities. Such being the case, it would be unscientific to accept job analysis as a scientific method to be used exclusively as the basis of the technique in curriculum construction. We cannot disregard the dilemma stated above and proceed as if it did not exist. If every specific activity means a corresponding specific ability, which must receive specific training, then the lists of activities already compiled, long as they are, amount to mere sampling. Why not an ability to sew on buttons, to thread a needle, and so on in endless detail? If, on the other hand, there is such a thing as a general ability (and there are such abilities), then what is the sense and the meaning of all the detail?

The idea underlying the whole movement is one of *retrogression*, not of progress. The New Education inaugurated by the psychologists of the nineteenth century stressed the importance of keeping in mind the nature of the child, and emphasized education for development. Child study and the nature of the learner were taken as the point of departure in the reconstruction of the curriculum. Job analysis would disregard the child; it would look *outward* and not *inward* for the educational objectives.

3. THE PHILOSOPHY OF EDUCATION IS MATERIALISTIC AND UNSOUND

The philosophy of education underlying this movement deserves some consideration. Herbert Spencer's dictum, "Education is the preparation for complete living," sounds the keynote. In attempting to list the activities that minister to complete living, as he viewed it, Spencer has given us the fivefold classification schematically represented below. Bobbit's classifications

found in "How to Make a Curriculum" are represented in the parallel arrangement showing how closely they resemble the divisions made by Spencer. The numbers in parentheses show the order in which Bobbit listed them.

Spencer	*Bobbit*
I. Those activities which have to do with self-preservation *directly*.	(2) Health activities. (6) Keeping one's self mentally fit.
II. Those activities which have to do with self-preservation *indirectly*.	(10) Labors of one's calling. (9) Unspecialized or non-vocational practical activities.
III. Those which minister to parental duties.	(8) Parental activities, the upbringing of children, the maintenance of proper home life.
IV. Those which are involved in maintaining proper social and political relations.	(1) Language activities: social intercommunication. (3) Citizenship activities. (4) General social activities. (7) Religious activities.
V. Miscellaneous activities, leisure time, recreation.	(5) Spare-time activities, amusements, recreations.

Although it is possible to interpret Spencer's definition in accordance with sound educational philosophy, nevertheless such an interpretation would not accord with his idea of "complete living." His idea of "complete living" was circumscribed by utility: his moral idea was confined to the natural. Keeping in mind that Spencer was an agnostic, his educational philosophy was unsound in so far as he did not consider the ultimate aim of man; according to him, man is an end in himself. Sound educational philosophy demands that this "complete living" be extended to embrace man's ultimate destiny, God.

To show the contrast between sound educational philosophy and that of Spencer and Bobbit, a schematic diagram borrowed from Dr. Shields' "Philosophy of Education" is given below.

Sound educational philosophy	*Educational philosophy of Spencer and Bobbit*
God { Man { Nature, Revelation, Art, Language } }	Nature Man { Art, Language }

The full meaning of what is lacking in this second diagram is admirably expressed by Dr. Shields.

The loss is even greater than this diagram portrays, because man's advancement in the past in all the fields of his endeavor was inspired and guided by the thought of God and by the teachings of revealed religion. It was religion that built the ancient temples. It was religion that guided the chisel of Praxiteles and the brush of Phidias. Without religion as the key, Homer, the Vedas, the Psalms of David and the literature of all the ancient world becomes a series of meaningless sounds. Without religion, the Divina Comedia and Paradise Lost are quite unintelligible to any mind. Verily, it is difficult to banish God from His world, and the consequences of all attempts to do so are unqualified disaster. Without Him the Ten Commandments cease to have any binding force other than the will of the majority. Without Him, home loses its sanctity, marriage its stability, and woman the high position by man's side accorded her by Christianity. Without Him, the newly born infant forfeits its right to live and the suffering their claim upon human sympathy. Without Him, man ceases to look upon his fellow man as his brother and regards him as his rival and his enemy. Without Him, the ethical everywhere gives place to the biological in the struggle for existence and man takes his place on the same plane as the brute. Without Him, justice and mercy yield to physical force in the conduct of life, and all that is highest and best in the world, all that Jesus Christ brought into the world and willed to transmit to all peoples through His Church, ceases to exist.

Such is the philosophy underlying the present methods of reconstructing the curriculum. Job analysis would set up educational objectives based upon opinion, objectives which do not embrace the ultimate aim of man's existence. Its view of education is "preparation for complete living," with the proviso, that this living is restricted to existence here below.

Another objection from the viewpoint of philosophy of education is the fact that this movement of curriculum construction based principally on job analysis, if successful in realizing its aims, would reduce education to the static conditions characteristic of past educational periods. The change in educational methods from the static to the dynamic is heralded as one of the chief characteristics of the New Education. With what supreme contempt modern educators condemn the lock-step, machine-like methods of the past! How eloquent educational eulogists become in praising the dynamic methods of the present as compared with the static, Prussian system of earlier educa-

tional periods. Nevertheless, job analysis, by discovering all those minute activities of every-day life and by setting up the abilities corresponding to these activities as educational objectives or goals for all, aims at standardizing the methods for producing standardized results. Every one would wear standardized clothes, live in standardized houses, eat standardized foods prepared in standardized ways on standardized stoves with standardized fuels, read standardized literature and indulge in standardized amusements. In reading some of the modern literature, one is reminded of the petrified civilization of the Chinese, of which the following is a splendid sample:

> Sons, in serving their parents, on the first crowing of the cock, should all wash their hands, and rinse their mouths, comb their hair, draw over it the covering of silk, fix this with the hairpin, bind the hair at the roots with the fillet, brush the dust from that which is left free, and then put on the caps, leaving the ends of the strings hanging down. They should then put on their squarely made jackets, kneecovers, and girdles, fixing in the last their tablets. From the left to the right of their girdle they should hang their articles for use; on the left side, and duster and handkerchief, the knife and whetstone, the small spike and the metal speculum for getting fire from the sun, etc.

Of course this is an extreme viewpoint of the whole scheme, yet it shows a tendency in that direction.

4. MISUSE OF STATISTICAL METHODS. LIMITATIONS OF THE METHOD

Another important criticism of the present movement of curriculum building through job analysis is the frequent misuse of statistical methods. Job analysis is essentially based on statistical methods. Among the more common errors frequently made by statistical workers, the following are characteristic of much of the so-called educational research:

1. Constant errors that come from judgment, or bias of the observer.
2. Variable errors in the observer.
3. Errors of judgment, and false perceptions and illusions.
4. False inferences.
5. General conclusions from few facts and data.
6. Careless, vague or ambiguous use of terms and concepts.
7. Mechanical manipulation of statistical data, ofttimes concealing rather than revealing the facts as they are.

8. Clerical and arithmetical errors.

9. Application of general conclusions to all classes of people alike.

FAILURE TO KEEP IN MIND THE LIMITATIONS OF STATISTICAL METHODS

It is important to stress this point on account of the popularity that this method is receiving at the present time. Dr. Bobbit maintains that, when we once discover the abilities required for effective social life, we automatically have the educational objectives. How is job analysis to reveal these educational objectives? Statistics may show, for example, that the amount of crime in the country is on the increase, but this does not show whether the country needs a larger police force, a better educational philosophy, or more prisons. Or, again, statistics obtained from a survey of all the families in a certain community may show that 70 per cent of the men spend less than $50 a year for clothing. But this does not show whether these men should spend more money annually for clothing, whether the price of clothing should be reduced, or their salaries raised. A statement of Dr. S. A. Courtis shows the weakness of the contention of Dr. Bobbit: "A valid objective is one which under standard conditions, never fails to produce the desired results; e.g., an unsupported body falls."

Then he shows that job analysis could not reveal to us the educational objectives of reading.

Let us consider the teaching of reading. Common sense tells us that a child cannot be expected to read until he knows his letters. Job analysis is a recent addition to the jargon of the educational conjurer, but common sense beat the modern psychologist to job analysis by many centuries. A job analysis of reading shows the need for the knowledge of the letters, and their sounds, a knowledge of all the possible combinations of letters and of words into sentences. The aims of these early teachers were clearly and objectively defined. But in the field of reading, we have changed our objectives. Today, the most effective teachers of reading teach a child to read whole sentences first; later to analyze them into words, and finally into sounds and letters.

Clearly he stresses the point that job analysis has not given

us our objectives in reading, but rather scientific research of a different character.

5. JOB ANALYSIS, UNDER CONTROLLED RESEARCH, AND WITH DEFINITE RELATION TO THE WORK OF THE SCHOOL, MAY YIELD VALUABLE RESULTS

Destructive criticism is cheap, easy to give and of little value. Constructive criticism is valuable, difficult to give and not always properly received when given. An excellent expression of the value of constructive criticism is given by a recent writer: "Somebody must be willing to set up a target. Perhaps shooting it to pieces will show how to construct other new curricula less vulnerable to the artillery of educational criticism." Perhaps job analysis, as it has been advocated and used so extensively in recent years, is such a target. It is well to emphasize the fact that job analysis, under certain *controlled* conditions and *directed* toward certain well-*defined goals*, may yield valuable findings. It cannot be denied that the scientific analysis of Ayers, Wilson, McKee, Rice, and others has already produced valuable results. But the reason for the success of these undertakings lies in the fact that the research in the various cases was *controlled* and *directed* toward a *definite* goal. Ayers set out to discover the most frequently used words in the English language. His research was controlled, limited, and directed toward a field that had a distinct relation to the work of the school. Wilson made a similar study in the field of arithmetic. Both of them sought information in a limited field that had a direct bearing on the work of the school and the curriculum. The more modern methods, represented by haphazard, aimless, job analysis, would reverse the process: they would extend the already overcrowded curriculum to include countless, minute, and unimportant abilities and activities that have been discovered by aimless, indefinite research methods. The proverbial cart is before the horse.

SUMMARY

The methods employed in job analysis at the present time are subjective and unscientific. The underlying principles involve psychological theories lacking experimental evidence, and the educational philosophy permeating the whole procedure is utili-

tarian and materialistic. Moreover, there is a tendency to give statistical methods preference over the more scientific procedure, with the result that many errors are made both in the manipulation of the data and in losing sight of the limitations of the method itself.

SYLVESTER SCHMITZ, O.S.B.

AN EXPERIMENT IN PRIMARY NUMBER WORK

The experimental work which I am about to describe began some five years ago, when I taught a fourth grade class to work a simple algebraic equation. My purpose was to amuse the children, but the ease and interest with which they accepted the work forced me to continue the experiment. I soon found that I had gone far to solve two of the most important problems of pedagogy, to awaken the interest of the child and to teach him to use reason, rather than memory, in number work. The equation is the basis of all analysis, and when the child understands its application he can go forward to higher mathematics on a direct path with only a slight incline.

The story of my experimental work might interest some, but it would lengthen this paper too much. I shall simply state my present purpose, methods, and some of the results obtained.

My purpose is to make number work in the primary grades cultural as well as informational, to aim directly at education rather than at instruction. My position will be better understood if I make my profession of faith at the very beginning.

I believe that Christian pedagogy should be based on the Christian concept of the soul, that this concept credits the soul with the power to act as well as react, with the faculties of reason, memory and will. I believe that we must distinguish clearly between education or the culture of these faculties, and instruction or the supplying of knowledge that will be useful to their functioning. I believe that we will never get the best results in education until we work directly and primarily to educate; that education must not be classed as a by-product of instruction. I believe that cultural work can be done in the first few years of school life that will more than double the child's ability to acquire instruction and will make the child intense in his love of study.

This position is in direct conflict with a principle of up-to-date pedagogy that is accepted quite generally in public and parish school teaching. In a recent written criticism of my work this principle was stated thus:

Our newer psychology discards the old idea of mental discipline, that is, the teaching of a subject simply because it is good training for the mind, regardless of its practical value.

I simply cannot understand the mental attitude of a teacher who believes that good training for the mind has no practical value, or even of one who would concede a higher practical value to any informational work. The east is east and the west is west. Christian psychology can never be reconciled to materialistic psychology. The Christian concept of the soul gives an intrinsic value to the culture of intelligence and will quite apart from its utilitarian value. It matters more to us what we are than what our life experiences will be. But cultural work done at the very beginning of school life has a utility value that cannot be overstated.

The education of the will must be the primary and chief purpose of education. The will determines the morality of the child, and this alone should make its culture all important to the Christian educator. This states the moral side of the question. But the educational interests of teacher and child are equally emphatic in calling for the finest culture of the will. The teacher can have no more valuable asset than the confident, interested will of the child. Such a will accomplishes the impossible, as the limits of the possible are commonly determined by the limits of will power.

To educate the child's will we must strengthen his interest and confidence. This, like all educational work, can be done best at the very beginning of school life. The child is eager to believe in himself, and encouragement, suggestion, recognition of every good effort will soon confirm his confidence. Under proper guidance he finds himself doing good work and his interest grows intense. A different mental attitude on the part of the teacher can atrophy the will and destroy interest. The child must be given the joy of accomplishment if interest and will are to survive. The chess player who knows only defeat will soon drop chess. The child is naively egotistical, and if you force defeat on him you weaken interest and awaken antagonism. My experience convinces me that by attending to these fundamental principles you can obtain intense interest and splendid confidence in a high percentage of children. I shall try to show this more specifically in speaking of results.

The education of the memory should be direct and systematic. To make no systematic effort to strengthen the memory at the very beginning of school life is criminal negligence that costs heavily in time, money and scholarship. The "Topsys" of our

social and educational worlds are very expensive. Not one teacher in a thousand realizes what can be done in the way of memory culture. This realization has come to me very slowly, so that my work in this line has been far from consistent.

My first effort to cultivate concentration and memory was made with a third grade class, when I required the children to take a number on one call and reproduce it in inverted order. I would call such a number as "eight hundred and forty-six" and have the children write "648." Before the close of the year many could take twelve figures on one call and reproduce them in inverted order. The next year the majority of the "A" class could take eighteen figures with a fair degree of certainty. Another exercise used was to call a number of words in irregular order, as: Number four is—; number two is—; number one is—; and then have the children call these in regular order. The majority of the children in our present eighth grade can take twenty words in this exercise, while some can take thirty. The only exercise tried in our first grade has been to call a child before the class and give four or five facts about her to the children, such as her name, her age, her street number, the color of her hair, etc., and require that these be recalled the following day. We have also striven to make the teaching of the combinations a systematic memory exercise.

An up-to-date criticism of the backward writing of numbers has been, "This is a useless habit; the child will never be called upon to write numbers backwards." Certainly the child will not be required to write numbers backwards in business life. But he will be required to concentrate, to take a series of ideas on one statement, to rearrange and reproduce these. We are told that abilities do not transfer. If this is true, let us tear down our universities and concentrate on technical schools.

Another frank criticism has been, "I have no time to waste on the backward writing of numbers." No time to waste on the culture of concentration! If you were starting a child on a journey of eight or more years could you wisely say, "Begin to walk at once; you have no time to waste on the building of a wheel."

My own experience convinces me that memory power carries into all studies. We have children in their third year of school life who, without the use of pencil or chalk, will work and call quite difficult equations, even quadratic equations, with easy

certainty, if these quadratics do not involve a square greater than that of twenty-three. Recently a child of eight was called upon, in the office of the State Superintendent, to square ninety-eight by the algebraic formula and substitution. She did this, orally, without hesitation.

The chief effort of my five years work has been the development of the reasoning power. By the use of the algebraic equation and the unitary method, I obtained satisfactory results but no very extraordinary results where I began the work after the third grade. Where I began the work in the first grade I have obtained very extraordinary results, even quite phenomenal results. The child reasons better at seven than he will a few years later if no attention is paid to the culture of selective thinking. Before the child enters school he thinks very much by himself and for himself. He is sometimes the most eager and persistent of original investigators. On entering school he comes into the hands of those who believe that he has no reasoning faculty to be drawn out, or, equally sad, of those who think that the time has not yet come to give healthy exercise to this faculty. He is told how to do things. Others do the investigating for him. He no longer searches for the "why." The instinct that made him a living question mark is killed, and his power of independent thought is killed and buried with this interest. He may find interest in reading, but he finds only weariness in mere mechanical number work.

As I am convinced that the value of the line of work that I advocate must be measured by the results obtained in the first three grades, I shall go into details here.

This year in the first grade I gave a five or ten minutes drill in the combinations each morning. The second morning of the term I stated one combination, talked around it, and got their promise to remember it. Each morning thereafter I took a new combination and reviewed those already taken. By Christmas the great majority of the class were quite at home in all the combinations of addition. As soon as the children could form their figures I began board work with a class of the brighter children. Two months later I turned these over to my assistant and took the remainder of the grade. The teaching sister is highly efficient and cooperates fully with my work in this grade; but as she has over fifty pupils we find it advisable to take the classes out of the room for special work. We obtain better

results when we separate the brighter from the slower pupils.

My first effort was to teach the children to associate the figure with the correct number of objects. The most promising exercise that I used for this purpose was to have the children print the letter "O" a number of times, and then put down a figure to show how often they had printed it. They were then asked to print the letter a certain number of times in a vertical line and show by the correct figure how often they had printed it; then to add two more letters and show this by placing plus two under the first figure; then to add and check by counting the letters. A like drill in subtraction followed. In this drill I used the word "subtract" quite often instead of "erase" or "take away."

My next effort was to obtain selective thinking by the correct placing of the figure and choice of process. To do this I used a formula showing the number of boys, girls and pupils in a class. The children printed the letters B, G and C in a vertical line with the sign "equals" after each letter. A class was then formed of two boys and one girl, and the pupils filled out their formula accordingly. The drill was continued, different numbers of boys and girls being used. The class was then dismissed and the drill continued by giving supposed numbers of boys and girls. Then the number of boys and the number in the class were given, and the number of girls required. The children were soon quite at home in the placing of their figures and in their choice of process.

From this formula it was easy to pass on to one showing cost, gain and selling price, keeping the cost and gain down to a single figure. Loss was also included. By giving two of the terms and requiring the third we obtained a splendid drill in the selection of proper place and process. In the second grade we used the same formulas and process to teach the use of fractions, and then giving the value of one of these fractions to find the unit value and the value of the other fractions.

Our next effort in the first grade was to introduce the algebraic letter and equation. I fully appreciate the contempt with which authorities will view the use of the letter in first grade work. I can only say that after three years of experience I am forced to meet contempt with contempt and ask them to meet results with results. They will tell me that the child has no use for the letter at this period of his life. If this means that we must never

anticipate the future needs of the child, I hold that the contention is unreasonable and vicious. Certainly the child can think things that relate closely to his child life more easily than he can think other things. But the Catholic child who is asked and trained to think spiritual things even in his first year of school life should be, and is, able to get the abstraction involved in the use of the letter. Another viewpoint is that the child has a very practical use for any instrument of drill that assists very much in the learning of the combinations. He has use for any instrument that will develop his abilities and stimulate his ambition by giving him the joy of accomplishment. He has use for any discipline that will make his high school and college work easy and satisfying. He has use for progressive, cultural work from the beginning of his school life, if he is to obtain a mental development that can never be attained by any effort to cram this cultural work into the four years of his secondary school life. When my critics speak from experience I will seriously weigh their statements.

We began the use of the letter before the close of the first month. We put the statement "A plus 1, equals:" on the board, and asked the value of this statement if "A" had a value of two, three, etc. In drilling on the tables of "twos" we used the statement "A plus 2 equals:" with the table of threes, "A plus 3 equals:" I have never found that the child had the slightest difficulty in getting the idea involved.

To teach them to distinguish between true and false statements we put very simple equations, such as "3 plus 1, equals 4" on the board, some true, some false, and asked them to select the true from the false; then to write three true and three false equations. The writing of false equations amuses the child. A little later we taught the children to transpose, by having them write "3 plus 1 equals 4," and beneath this, "3 equals 4 plus 1." They saw that this was untrue, and that when we changed to "3 equals 4 minus 1" we had a true statement. It was then easy to get the three statements, "A plus 1 equals 4," "A equals 4 minus 1," and "A equals 3."

We now had the algebraic equation as an instrument of drill. We also had something much more important—the eager, confident interest of the children, who were anxious to show the world that they were doing high school work.

In teaching the multiplication tables we used the letter a great

deal, as the children love its novelty. In teaching the table of fives we used the statement "5A equals." They would write this statement and its value, according to the value given to "A." We would then have them write such a statement as "5A equals 10" and require the value of "A." Sometimes we drilled with the primary purpose of having them distinguish and name the process used. A few hours of such drill made the child very familiar with the use of the letter and proved very helpful in teaching the combinations.

The value of the use of the letter is not perceived until we correlate it with other work. How easy it is to pass on from work just described to such an exercise in the unitary method as: "5A equals 10, A equals?"; and, "6A equals?"; and from this to: "5 apples cost 10c, 1 apple costs?"; and, "6 apples cost?"; or, 3 fourths equal 12, 1 fourth equals?"; and, "4 fourths equals?"; and then to, "5% equals $60.00, 1% equals?"; and "100% equals?"; or, "My rate is 5%, my commission is $60.00, find selling price." The last type of question is used in oral work for our second grade pupils. It is only one step beyond the work used to drill them in their combinations.

We have also drilled along such lines as, "Write a statement that means two more than A, three less than A, twice as much as A, and four more." We applied the equation with such simple problems as: "Jack had A marbles, he won 2 and now had 6; what number did A stand for?" The child thus trained thinks algebra as naturally as he thinks in the language of his infancy. Last year a class of the first grade, taken in February and given a nine weeks' drill along these lines, scored a class average of 85 per cent in their addition and multiplication tables. They are now doing good long division and handling some quite difficult equations and formulas.

This year I have entrusted the work with the brighter children to an assistant, while I give personal attention to the slower pupils in the first five grades. In former years I worked more with the brighter children and thus came in for rather severe criticism. I believe this criticism was unjust. The eager, talented child has in justice a right to the fruits of his talents and his will. To hold him down to the level of the lazy or retarded child is to sin against the individual and against society. Society needs the finest fruits of education, and these can be had only when talent and will are given every encouragement. When you

refuse or neglect to give the willing, talented child satisfying work you draw him down to the moral and intellectual level of the lazy and retarded.

It has been quite generally believed that my line of work could not be used with the slower children. The results obtained, this year, with the B classes convince me that this is a mistake. In March the B class of the first grade knew their addition tables fairly well and were doing good work in multiplication with the table of fives. The results with the B class of the fifth grade have been among the most satisfactory that I have ever obtained. In the third and fourth grade B classes, interest and progress are more than satisfactory, though not phenomenal.

I believe that the possibilities of my system are best shown by a group of girls in the third grade. These children were given special work of thirty minutes a day for one month in the first grade and seven months special work in the second grade. This year they have been permitted to join in special work with the B class of the fifth grade. To prove my contention that the cultural work done in the first two grades has more than doubled their capacity to accept new work, I shall make a detailed statement as to their present abilities. They do not stand alone. In a recent drill of four lessons in which they were given the area of a circle and required to find the radius, diameter and circumference, I used as monitor a nine-year-old girl from the fifth grade A class. She formulated the questions and corrected their board work.

If these children, in their third year of school, are given the value of any two of the terms, altitude, base, hypothenuse or area (except the combination area and hypothenuse) of a right triangle, they will find the value of the other two terms. In statics, if given the value of three of the terms, horsepower, weight, time and height, they will write and apply the formulas required to find the fourth term. They do good work in common fractions, decimal fractions and percentage. They do quite good quadratic equations, and three of them will call these orally so long as they do not involve a square greater than that of 23. They work with extreme rapidity. A visitor recently timed them to twenty-one seconds on the problem: "Square 32 and prove your work by taking the square root of your answer."

If giving an oral demonstration with these children, I would use such questions as are indicated by the following types:

My rate is 5%, my commission is $223; what is the selling price?

I loan at 6%. In 5 months I receive $20.00 in interest; how much did I loan?

I sell so as to gain 2/5ths of cost. My selling price is $63.00; what was the cost and gain?

I sell on a commission of 5%. At the end of the month I put 4/7ths of my commissions in the bank. Out of the rest I spend $90.00 and still have $60.00. What were my sales for the month?

I send two head of cattle to a commission man. He charges me 3% and sells at five cents a pound. His commission is $2.70; what was the average weight of the cattle?

In solving these questions they would use the unitary method, calling each step without hesitation. The following questions they would solve by algebra, calling each step without any written figures or letters:

Mary is a certain age; Florence is three times as old, all but two years. The sum of their ages is 18; how old are each?

I am thinking of four consecutive numbers, their sum is 94; what are the numbers?

Give the square of "A" plus 17?

I am thinking of a certain number. I multiply this number by itself, and then add 8 times the same number to my answer. I now have 468. What was the number?

Square 86, using the algebraic formula and substitution.

Multiply 255 by 245 or $(a+b)\ (a-b)$.

Certainly I do not put this work forward as normal work for children in the third year of their school life. And yet, while at least four of the children would work any one of these or like questions with unbelievable rapidity and accuracy, they are not abnormal children. They would still be struggling with the combinations if their will, reason and memory had not been systematically educated. They remain absolutely childlike in character, and their oral work is all done in the spirit of play.

I know that these children have not the background of knowledge to fully appreciate much of this work, but that background is being acquired. In the meantime all the labor of the drill that they are obtaining in the fundamentals, in fractions and percentage is changed to play by eager interest. I know that many of the problems used will be condemned as violating certain rules of problem forming. Some will be condemned as puzzle problems; but to a child that has been trained to analyze they are no longer puzzles and they have their place in useful

drill. Others will be condemned because they do not conform to situations that will be met in actual life. The problem in which the area of a circle is given and the radius or diameter required will be condemned because in concrete cases we must know the radius or diameter before we find the area. This supposed law that every problem must conform to situations that will be met in actual life is a very catching fallacy. It is one of those new ideas that satisfy up-to-date instructors that they are quite superior to the educators of a few decades ago. It is also one of those fads that make for present-day inefficiency in mathematical training. The child will understand a process better when he is able to trace it backwards. The reversal of a problem in order to obtain a better mastery of a process is not unreasonable. Only extreme shallowness will condemn it because it does not conform to a fad.

Problems that are given for their cultural value rather than for their informational value are ridiculed as mental gymnastics. What would be the standing of a physical culture teacher who would hold physical gymnastics up to ridicule; who would state very dogmatically that no exercise must be given in physical culture that does not conform to situations that will be met in our industrial life? The indian club, the vaulting pole, the bat and ball must be taken away from the child; he can be developed by the use of the hammer, the saw and the shovel. The materialist should be the last to deny the parity between physical and mental culture. The real cause of their ridicule of mental gymnastics is their eagerness to stress their belief that there is no such a thing as a soul, with spontaneous powers to be exercised or developed.

The Catholic viewpoint was well expressed by Father William O'Ryan after a recent examination of the work of our children. He said:

> If I had seen extraordinary work done by two or three children I should have attached little importance to this. But when I have seen class after class do phenomenal work I must conclude that something has been awakened here. That something can only be your soul with its unmeasured powers of reason, memory and will.

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INTEREST AND ABILITY

Are we interested in our abilities or are our abilities determined by our interests? Do we like to do the things that we can do well, or are we often prone to attempt the things of which we are not capable? Of course, when we put the psychological problem in this crude form, it is only too evident that we are dealing with our aspirations, and aspirations undoubtedly are an incentive to higher things. But the same problem is implied in the question of aspirations. Why do we aspire to do a certain thing or attain to a certain vocational or occupational status? It would be unreasonable to suppose that an aspiration is a mere gust of wind, blowing us hither and thither, without any foundational basis in the mentality of the individual. The basis may be negative, it is true, rather than positive. It may be due to our ignorance of the total situation. We may be attracted by only the outer glitter of the work and not be truly aware of its real nature. Such may evidently be the case with those children—and I fear it includes all who pass through a certain stage of mental development—who aspire so ardently to be locomotive engineers, or policemen, or other characters of public conspicuousness. They are attracted by the glitter of the uniform, or the apparently commanding position of the occupation, without at the same time having any knowledge whatever of the duties of the incumbent.

It is, of course, the aim of education to give every individual an insight into the social organization and to clear up the partial ideas of life situations that we have when we are children. This helps to disabuse the individual of many of his childish illusions. Present school procedure, particularly exemplified in the junior high school, also takes care pretty well of the problem of initiating the children into the esoteric mysteries of many of the trades and professions. They do this by means of visits to local factories and by talks from men prominent in their callings. As a result, it may fairly well be hoped that children get, or will get, a fair idea of what there is to be done in the world and just how it is done.

But this does not solve the problem. The school must not only offer opportunities to the child for self-expression, but it

must also find out the abilities of the child that crave expression and direct them along socially useful lines. In other words the school has a guiding function to perform, and it can do this only when it intimately knows the individual child. The problem of vocational guidance is one of the outstanding educational problems of the present time. The task must be attacked not only negatively—that is, by giving the child heaps and heaps of information about the different vocations so that he will not be laboring under a delusion when he makes his choice of work—but also positively, by finding out just where he fits, in regard to native ability and native or acquired interests.

It would simplify matters immensely if it should turn out that the individual—apart from those cases that are due to ignorance of what the task requires—would always like best to do those things that he can do best. The simplification is evident, for it is much easier to measure abilities than interests. Psychologists can measure mechanical ability fairly well, they can measure musical ability fairly well, and they can measure clerical ability fairly well. But when it comes to measuring interests it is another matter. They use blood pressure curves, pulse curves, psycho-galvanic curves, and other technique known to the psychological laboratory, but nearly always with this result—the indications are not specific. Pain and pleasure, hope and fear, anger and joy, all give unambiguous records of an emotional reaction, but it is only a general indication, something that gives the experimenter no inkling as to just which of the several affective responses has caused it. It is apparently impossible to analyze such objective measurements and to be able to place our finger upon the particular emotional attitude. A general conclusion as to the existence of some affective state will evidently not help us much, unless we have, at the same time, means of discovering whether it is, for instance, pleasure or displeasure. In the final analysis, we must rely upon the subjective estimates of the individual experiencing the emotion.

Theoretically, there might not seem to be any serious objection to asking the subject to describe his internal mental condition, but apart from the merits of the case, it is only too evident that introspection is looked upon with considerable disfavor at the present time. Much of the psychological work that has tried to pass for good introspection has undoubtedly merited

much of the reproach leveled against it and has, fortunately or unfortunately, brought the whole technique into disrepute. The particular application of the introspection method to group problems by means of the questionnaire has not helped matters out, particularly when the questionnaires attempted to deal with past mental states. It is difficult enough at the best of times to try to analyze our present mental condition without bringing on the added hazard of reading into the past what we do not actually remember but what we believe should have been there according to our present point of view. Our memories are often rationalized into falsehoods and inaccuracies.

Much of the work done on the permanence of interests has laid itself open to such a charge by elaborating upon data secured from memories that may or may not be strictly accurate. Thorndike had a number of his university students rank certain elementary, high school, and college subjects, first according to their interest in them, and then according to their ability in them. His correlation coefficients ranged as high as .89. He states that "the correlation between an individual's order of subjects for interest and his order for ability is one of the closest of any that are known." And "A person's interests in the late elementary school period resemble, in their order and relative strength, the constitution of interests which he will have eight years later to the extent of six-tenths of perfect resemblance." "Interest and ability are bound very closely together. The bond is so close that either may be used as a symptom for the other as well as for itself."

These conclusions, it is true, may not be unwarranted by the facts, but the technique employed, the use of memory reaching back seven or eight years, does not rule out the suspicion that the subjects may have unconsciously judged their interest from their ability or vice versa. In fact, this possibility is lent some weight from another study of a like problem by Bridges and Dollinger, who incidentally concluded that students are very poor judges of their own ability. The authors had a number of college students rank certain subjects according to their interest in them and also according to their supposed ability in them. They then correlated these rankings with the semester grades obtained in the various courses. They found low correlation coefficients between interest in a subject and college grade in

that subject, but rather the opposite when interest in a subject was compared with estimated ability, which would incline one to believe that a person is a poor judge of his ability for the very reason that he judges his ability by his interest.

To further impugn the value of interests in guiding children towards certain occupations, we have the added suspicion that interests are developed and are always changing. "For example, a boy at the age of five may wish to be a mail-carrier like his father, at eight a railway engineer, at twelve a prize-fighter, at sixteen a preacher, and so on." (Kitson.) And the change may go on into maturity.

Douglas reports that of high-school seniors in the State of Washington, 54 per cent acknowledged that they had changed their vocational intention in the course of their life time. . . . Some light is thrown on this question by facts discovered by the author (Kitson) showing that 16 per cent of the persons mentioned in "Who's Who in America"—probably the most stable members (vocational considered) of the population—changed vocations from one to five times.

Apart from the fact that "not all of these changes may have been prompted by shifts of interest" it may be true also that, even in the cases where interest changed, this was the result of an educational enlightenment, which allowed for a better expression of the individual's special abilities. If such were the case, it would only prove more conclusively that interests in the final analysis are correlated with abilities.

And again, the variability of vocational interests may not be so great as these figures would seem to indicate. Franklin studied the permanence of the vocational interests of junior high school pupils, whom he considers to be in a very formative stage, following them through for a year and a half. Although this may not be quite long enough to make for absolute surety, he made one advance at least over many previous investigators in testing the pupils himself at various periods and not relying too much upon memories after the event. He concludes, "The vocational interests of junior high school pupils show a very high degree of permanence over a period of at least one year—and that a critical one. Two children out of every three have the same preference at the end of the period as they had at the

beginning." Another important conclusion is: "The pupils who adhere to clerical interests make much higher scores on a prognostic clerical test than the larger unselected group, of which they are a part, although they are of lower general ability than the larger group," thus seeming to confirm the opinion that the permanence of interest in any work depends upon our ability to do it successfully. We still have no positive indication that an individual's interest in a vocation or calling, after an intelligent insight into what that situation calls for, is not directly influenced by his fundamental ability along that line.

The question of the relationship between general ability or intelligence and choice of occupation does not seem to offer so much of value from our present point of view. The fitness of an individual for a certain type of work depends more upon special abilities than upon general intelligence. But even here we find much of interest. People do lose interest in certain occupations, or at least give up engaging in them, because they are ill-adapted to the work on account of low intellectual capacity. In a follow-up study of high school students after being out of school for four years, Proctor found that there was a greater tendency on the part of those of lower Intelligence Quotient to be actually engaged in a lower-ranked occupation than that to which they had originally aspired. It is a general tendency to aim too high, but the less intelligent suffer most when they have to adjust themselves to life situations. "Fryer, after measuring the intelligence of representatives of several occupational groups, set up standards representing the amount of intelligence of a number of men who said they were interested in certain vocations. He then investigated the amount of correlation that existed between degree of interest and possession of intelligence required by the vocation and discovered a correlation coefficient of .38," which is positive but not very high. These results are enlightening, but they do not carry us very far along the road to guidance. This demands the investigation of special abilities.

It would be very encouraging to educators of the old type, and also perhaps very practical, if interests would create an ability. All we should have to do in that case would be to motivate the child's work along certain lines, and the corresponding ability would be developed. This may not be altogether absurd when

it is a question of creating such a complex thing as vocational fitness, since there are innumerable ways in which the same work may be accomplished, but the dictum would not apply, at least in the same degree, to many of the more simple abilities. Much of the experimental work of the educational psychologist goes to prove rather conclusively that general intelligence is closely related to some special functions and very little if at all to others.

> From knowledge of a pupil's general intelligence we can make very reliable predictions as to his capacity for reading and for arithmetic, somewhat less reliable predictions as to his aptitude for spelling or mechanics, and that our predictions concerning his ability to draw, sing, or play musical instruments should be given without confidence in their reliability, if given at all. (Hollingworth.)

This means that the correlation between such abilities as general intelligence and music or drawing is zero and that it is very high between general intelligence and reading or arithmetic. That such should be the case is not explicable on the ground of developing interests; for if interest should enter as a variable factor, there is no reason why it should affect one of these relationships rather than the other. If ability to read and musical ability depended upon motivation of activity, then they should both correlate zero with general intelligence. There is an underlying relationship among abilities which is unaffected by interest.

But interest may work to produce the expression of abilities in another fashion. This is the psychoanalyst's device of compensation. Demosthenes became a great orator because he wished to compensate for his defect of speech. A physical weakling may wish to compensate by his educational attainments. The poet very often takes refuge in his world of unrealities to compensate for his lack of ability to face life situations. And so on. Our abilities would be founded upon our inabilities. But the paradox is only apparent. A certain lack or defect might indeed spur us on to overcome it, but we should do so by making use of the other abilities that we have in greater profusion. Our final achievement would in the last analysis depend upon our native abilities and indirectly our interests would also.

The problem of the relationship of interest and ability is far from being solved, but it seems that it must be approached from

the point of view of specific abilities, which are easily measured. A suggestion for an objective approach to the question is the following:

The Army Alpha Intelligence Test and the Stenquist Mechanical Aptitude Test were given to a class in experimental psychology on different days. On the third day each individual was then asked to write on a slip of paper which of the two tests he preferred. He was also asked to write on the reverse side the name of the test in which he thought he did the better. These data were then compared with their actual standing in the two tests with the following results:

Subject	*Actually did better in*	*Test preferred*	*Thought he did better in*
No. 1	Stenquist	Stenquist	Army
No. 2	Army	Army	Stenquist
No. 3	Army	Army	Army
No. 4	Stenquist	Army	Stenquist
No. 5	Army	Army	Stenquist
No. 6	Army	Army	Stenquist
No. 7	Stenquist	Army	Stenquist
No. 8	Army	Army	Army
No. 9	Army	Army	Army
No. 10	Army	Army	Stenquist
No. 11	Stenquist	Army	Stenquist
No. 12	Stenquist	Army	Army
No. 13	Stenquist	Army	Army
No. 14	Stenquist	Army	Army

The cases are evidently far too few to base any valid conclusions on the results, but it is perhaps significant that no relationship between any of the columns is apparent. The almost unanimous choice of the Army test gives attestation perhaps of the relative variety of the items in it as compared to the monotonous character of the Stenquist. The fact that it is an "intelligence" test also very probably influenced the preferences. The students are evidently poor judges of their ability.

Due to the practical incomparability of the two tests, the results are probably meaningless. But this does offer a suggestion for a better technique. If we recorded children's relative interests in, say, reading and arithmetic, and then gave them standardized tests, which are more nearly comparable, we might

be able to draw interesting conclusions from the data. At least it should be worth trying.

SUMMARY

There is a very great problem at the present time in the probable relationship existing between ability and interest. It is of very great concern both to educational and vocational guidance. But interests must be measured objectively, at least they must be taken while they are in full bloom. Our attempted remembrance of interests can never be above suspicion. The abilities to be measured must also be specific, as it is specific and not general abilities that can be the more easily attacked, and that are also the more important from the vocational standpoint. A suggestion is made that we make use of standardized tests and correlate the child's ability in the various subjects with his interest in them.

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THE TEACHING OF ORAL ENGLISH—III[1]

The chief criticism of a course in oral English is that students do not have to work in order to get credit for it. The students themselves speak of a "pipe" or a "fresh-air" class, meaning that bluff will carry one through. To be sure, the object of an intelligent teacher is never merely to make students work; his goal is to lead them to acquire certain ideals, appreciations, attitudes, skill, and habits. But some materially minded teachers may get excited about not having written work to throw into a waste basket, and consequently they might be interested in knowing how one could prevent the teaching of oral English from becoming a joke among their co-evilists. If one's class is large, what kind of assignment could he make for those days on which there is not a new round of talks or on which he uses the impromptu or extempore?

The character of the speech accepted as satisfactory will suggest to the student the type of preparation necessary, and emulation plays a more important part in the class in oral English than in any other, because everyone hears everybody deliver his material. If we gain the good will of the student, if the conduct of the course wins his respect, if the emotional tone of the classroom is pleasant—and students cannot work best unless it is—they will be eager for training. When they can see their progress and the general improvement in the class, they will give their best efforts.

The problem of assignment on days on which new speeches are not prescribed is the same as that in any course on days when we have tests or papers written impromptu. Pronunciation lists keep students busy for days. Such lists are best mimeographed or printed with the accents and diacritical marks included. (They may be put on with stylus or marked in class.) That procedure assures the students having the correct form. They are impressed with the teacher's accuracy and his ability to collect material. ("Workers make workers.") All the students lose is the busy-ness of looking up the words. The time saved by their not consulting the dictionary can be devoted to learning the correct form, which is the goal of the assignment. The copying of other students' work is obviated.

There is little point to collecting lists of words never found in

[1] Parts I and II appeared in the April and October issues.

students' speech vocabularies, although there is stimulus in discovering that words are not always pronounced as their letters would suggest. The most helpful lists result from recording the mispronunciations heard in class and on the campus.

Sheets of correct speech forms may be collected and used in the same way and with the same results. Students resent the inclusion of errors which men of their advancement would never make. Should we find anyone using "learn" for "teach," "throwed," and similar crudities, his case requires private treatment. "Come" for "came," and like errors, arise from slovenly enunciation rather than from ignorance of verb forms.

Clear enunciation results from deliberate speaking. Correct pronunciation is really more important, for violations of the former result from carelessness; of the latter, from ignorance. However, no educated person can afford to slight either if he hopes to have people listen to him with ease and enjoyment. If students do not understand accent, the common diacritical markings, and sound values, they must learn them, of course; and they must be competent in the use of a dictionary. The correct pronunciation of "for," "was," "of," "because," "address," "used," "detail" and the like, the use of "laid" for "lay," "like" for "as," "says" for "said," "ten-foot" instead of "ten feet long," "as" for "so" in comparisons of inequality ("not nearly so good as"), "as far as" instead of "in so far as" and errors of that type will afford plenty of material. The nice use of "aggravated," of "due to," of "apt," "likely," and "liable" and the avoidance of "enthused," "this here" and "that there," "acrost," "try and," "get up and talk," hackneyed expressions, colloquialisms, and so forth, offer opportunity for much practice outside the class period.

If one is using a handbook, such as Greever and Jones, "The Century Collegiate Handbook," on alternate days students can fill in blanks of correct speech forms, sentence structure, and so forth. In a text as clear and attractive as Manly and Rickert's "The Writing of English," there are many chapters which may be assigned without discussion in class. In five minutes one can test the preparation with a true-false test or a yes—no—didn't say.

When a talk is particularly good, such as the journey of a book through a bindery or through the process of being prepared for circulation, the student may be asked to write it. In fact, extra papers may be assigned students at any time.

A course in reading can be conveniently conducted in connection with work in oral English. On days when an additional assignment is omitted, during the preparation period students may read. (This idea could be developed in connection with the formation and conducting of reading clubs.)

If one uses Lyman's "The Mind at Work" as text, he may parallel his oral work with that text. The suggestions for supplementary reading, oral class activities, investigations, problems, and projects afford abundant material for intelligent, busy work.

Students may be granted time between assignments for the memorizing of material, for the staging of plays, for the reading of prose or poetry without the text, or for the mastering of anything the instructor wishes to work with when the student cannot be hampered by notes or papers.

All phases of individual work—drill for correction of speech defects, awkwardness of any kind, and so forth—may easily be taken care of in time free because of non-assignment for class. These suggestions have brought results.

List the grammatical errors you have caught yourself making. Add to them those unconscious violations to which attention has been called. Ignore the wrong form and practice thoroughly the correct form. Compare "The Collegiate Handbook," sections 50–59 and 60–69, and Manly and Rickert's "The Writing of English," appendixes.

What are your problems in enunciation and pronunciation? Submit a set of exercises showing how you intend overcoming your difficulties. Explain in detail exactly what you intend doing; you may select exercises from books, but it is better to make up your own.

List alphabetically the words you have heard mispronounced in your classes, and mark the correct pronunciation.

For practice in mastering the mechanics of appearing before an audience to the best advantage, for overcoming self-consciousness, stage fright, and inability to think on one's feet, the one-minute extempore or impromptu speech is particularly good. For the former, students take cards bearing subjects from the instructor's desk as they enter the classroom; for the latter, topics may be assigned orally as the student takes the floor or he may take a card from the pile when he appears before the class. One can use a round of one-minute speeches on any sub-

ject the student chooses; or the speaker may take a point of view he is sure the audience will disagree with and try to weaken the audience on their objection.

Another phase of this type of speech—which might not be used successfully in high school—assigns to the student a short talk during which the audience asks impertinent questions. The speaker should gain in the ability to think quickly and to control his temper and should refuse to answer irrelevant questions or to let the heckler draw him off his subject. He will, in addition, learn the advantage of restating an ugly question to take the nastiness out of it. This same type of speech can be used advantageously in any class in which you have a student who is an authority in his field. One of four best talks resulted from a student's willingness to let his audience ask him any questions they wished about swimming.

Let the students suggest topics; within a week I collected two hundred in that way. Let them discover that the apology or remarks about themselves are out of place and that, if they are explicit, specific, resolute, and lucid in telling what they know about their topic, they cannot fail. Encourage them to begin to plan the development of their talk before they say a word. With the first and second topics in mind they will be able to continue thinking ahead to an effective conclusion. Training them to succeed in this type of exercise will best convince them that success is possible.

It is not wise to place the impromptu in the student's hands without a word of warning—that you may establish principles but never a formula for this type of speech, because each audience differs. That prevents the adoption of a set form. But with the right mental attitude, which always comes first, there is a strategic point of attack. If you get that, everything else comes.

In so far, however, one can formulate principles for the impromptu, these may be mentioned:

1. Neither apologize nor talk about yourself.
2. Reduce your topic to an assertion and give reasons for it.
3. Follow with a specific instance.
4. Then give, if possible, the obverse of your illustration.
5. Let this contrast lead to a restatement of your assertion with reasons.

To illustrate: suppose one were assigned the topic, "Do one's

companions affect the character of his school or life work?" The student begins directly:

(2) One's companions affect (or do not affect—whichever you choose) the character of his school work and often of the whole course of his life because they are an influential part of his environment.

(3) Recall the persistence of St. Ignatius Loyola in trying to interest St. Francis Xavier in things of God while both were students. And St. Francis Xavier, convinced, lived to baptize over a million. Or review the influence of St. Ambrose over St. Augustine. Or take a case which I know better than anyone else. After changing residence, after leaving care-free, noisy roommates, the change to association with quiet, studious fellows raised a general average from 72 to 86 per cent.

(4) When I came to Notre Dame, among the first young men I met were two students of engineering, who resided in the same hall. One was a junior and the other a freshman. The former was a rather clever lad who could grasp things easily; one of the kind that "gets by." The freshman was really an industrious chap, much interested in his work and not given to pleasure seeking. A few weeks ago I visited these lads in their room and was surprised to find that the influence of the junior had a depressing effect upon the freshman. After inquiry I found that the junior was still "getting by"; but the freshman, not being so clever, was put on probation by his faculty.

(5) Companions do affect the character of one's school work because they stimulate and inspire or discourage and prevent accomplishment.

In drilling on the use of this formula, during a class period everyone wrote on the aforementioned subject. Then we compared results. Next we used, "Should newspapers print details of crime?" The best argument for the printing of the details used as example the fact that any student reading the diary of a student at Northwestern University who "sucked pleasure dry" before committing suicide would be warned to strengthen his spiritual life, to get a better hold on his religion, and so forth.

When discussing, "Is the study of a distasteful school subject ever beneficial?" the question arose as to whether our first rule, "Do not talk about yourself," ruled out the citation of personal experience. It was decided that it did not and that citing one's own experience held the attention of the audience. One student suggested that "confessions" attracted most people, but the danger connected with them lay in the fact that the speaker would be criticized for talking about himself. However, he

thought, if they do dislike you for egotism, they will remember your ideas, and that is, after all, the important consideration. Another called attention to the advantage of turning a speech upside down; that is, sometimes one need not build up an argument or prove his case if he but show his conclusions, particularly if they are so intelligent or their plausibility so patent that they are accepted without proof. (To many, Sister Madeleva's interpretation of "The Pearl" is so convincing that there is no need to argue the shortcomings of the interpretation usually accepted heretofore.)

The only objection to opening a course with impromptu and extempore work is that the students must have assignments for work outside of class. It is practically impossible to overcome the handicap of a two weeks headstart in the idea that a course is a snap. That may, though, be easily taken care of, as I have shown at the beginning of this paper.

If, however, one fears to open with the impromptu, the class can start with stories, jokes, and anecdotes—provided they are short so that everyone in the class will get the opportunity to speak often.

Everyone likes to hear a good story, and to be able to appreciate or to tell one is a distinct asset; the habit of being on the alert for the good story in one's reading and listening should be cultivated. Fortunately, in America it is not necessary that our humor should, for the most part, arise out of brutality or vulgarity; and university men should be trained to leave out of their lives and conversations stories or jokes that should lower self-respect in the telling.

Kindness and healthiness of mind forbid the telling of *double entendres,* or anecdotes involving commonness, vulgarity, or swearing, stories about Confession or the Scriptures, or those making light of anyone's race or religion. There are so many good jokes and so much wholesome fun possible that even if the suggestion did not make it difficult for our neighbors, common sense would forbid them.

Few experiences are more disconcerting to the would-be mixer than the discovery that instead of gaining our approbation he loses in our estimation by his attempt to be taintedly humorous. One of the students (a clerk at a soda fountain during the summer) told me that, having been complimented on his line at the

corner drugstore, he attempted to impress his fellow freshmen at the table with a questionable story. The table companion whom he wished to know better stunned him by remarking, "You look more intelligent than that." No more was needed to make the former "fizz-ician" feel that he must live down the bad impression he had made. Students realize that by their manner they can usually head off the vicious story; but, if the *raconteur* is particularly dumb or vicious, they may have to tell him that his stories are not welcome.

In telling a story into which conversation enters they learn to make their subjects talk in character, differentiating them by shifting the trunk to one direction and to the opposite when the change of speaker occurs. Naturally two people do not talk alike, use the same expressions, or the same inflections, or talk on the same subjects. When reciting monologue, students must keep in mind the fact that they have auditors.

Of course there is no place for monologue in conversation, which is a neglected accomplishment among us. Its neglect justifies our mentioning the matter in a discussion of oral English. In fifty years the very need of conversation may have died out. Possibly we shall then listen to someone at the end of a tube tell about the weather.

Assignments: (1) Relate the story of an embarrassing moment, an amusing or exciting personal incident, a joke, an anecdote, or a humorous story. The ability to entertain your hearers can be cultivated if you have courage and will practice. Brevity is the soul of wit. Give the essential facts of time, place, and principles together with all preliminary data necessary for an understanding of the point. Omit all non-essential details. Keep your point in mind, prevent your hearers anticipating it, and do not keep your audience waiting. When you have made your point, you have finished the story. Reveal the point clearly and exactly, but do not repeat it. If anyone in the audience misses the joke, as a story teller you have failed.

(2) Tell the weirdest (ghost) story you have ever heard or the most interesting story of the supernatural.

We have said that the preparation for a class in oral English can afford difficulty if the members of the class are lazy, are looking for a snap course, or if they are morally weak, preparing every lesson that must be written out before approaching the

preparation of this type of work or if crowded for time letting the oral English go. We have stated also that the advantage from the study of oral English will accrue directly in proportion to the student's effort; and therein will lie a great stimulus. If students see that they are learning, they will prepare in order to achieve. The honorable ones will prepare oral English first in order not to be tempted to slight it. This will be true particularly when they realize that they can prepare a talk as they walk across the campus or as they lie in bed; in fact, it is desirable that they be conscious at all times of trying to master the use of the mother tongue. If mimeographed assignments are distributed far enough ahead, they can prepare in advance.

Many students who wish to retain their hold on the mechanics of writing will write out their talks and submit them for criticism. That is an excellent type of preparation. The same is true of submitting an outline of the talk each time the student appears before the class. Such an outline may be a mere listing of the main and subordinate headings, or for important talks it may consist in a detailed filling out of such a blank as Phillips "Speech Outline" (which may be used to good effect for written papers as well).

After one knows his general subject and the kind of audience he will address—by vocation, age, religious and political opinions, the place of assembly (college, high school, public hall, court) and the selection of the country (city, town)—one's first duty is limitation of a subject, the selection of a specific title so that within the allotted time (which must be known definitely or approximately) he may deal adequately with a specific phase of the general subject.

Although numbers of people who present material to the public do not realize the importance of this limitation of subject, it is the most important thing amateurs can learn in the writing of English; and it is equally important in speaking. One student did it effectively in describing a trip through the Studebaker automobile plant. He was limited to three minutes. He knew he couldn't tell about everything he saw, so he described one specific process—the making of a crank shaft.

When the subject has been limited one must consider whether his audience is familiar with his topic, whether they will be likely to agree with the views he develops. These considerations,

together with his object in making the speech (comprehension, impressiveness, belief, action, entertainment, or a combination of these objects), will affect the selection and arrangement of his material.

It is worthy of remark that Phillips is vague in his idea about clearness as an end in making a speech. What he means, quite probably, is that by our talk we hope to give our hearers a clear understanding of our material. The clearness itself is not the objective; the comprehension of what we offer is our goal.

For drill in exposition, in giving an audience a clear understanding of a method, a system, a contrivance, or a process, these assignments may be used:

1. Read the description of a controversy. Show both sides and explain the points of difference.

2. List the ways of attacking a problem to secure clearness of understanding from the hearers.

3. Choose an intricate problem. Work it out. Make up your mind as to the method used.

4. Listen to an effective explanation. Watch the speaker's method of making the material clear. Draw conclusions from his attack.

Presenting material in chronological order or in the order of importance helps to clarify. The same is true of taking a typical case (instead of saying, "Suppose—," say "Take the case of Mr. White for example") and showing how the less typical vary. Be sure that any statement used in explanation does not itself require elucidation.

Assignments: (1) Prepare a two-minute speech whose object is to explain clearly through use of a diagram something not necessarily mechanical.

(2) Bring to class a cartoon. Prepare a speech of a minute and a half which will convey your impression of the cartoon.

(3) Explain in two minutes why it is essential that a demonstrator or a salesman should know his commodity thoroughly and be able to express himself clearly.

(4) Von Moltke said, "Any order which can be misunderstood will be misunderstood." Cite an instance in which the inability of a foreman or boss to make his directions unmistakable caused great loss or harm.

(5) That type of talk whose object is to move the hearer to

action is not difficult for beginners because of the tangible results. In making a speech whose goal is to get somebody to act, limit your demand to the smallest with which you can be satisfied and tell your audience how, when, where the thing can be done. Have each student bring to class something he no longer wants and try to make an actual sale.

(6) Cite an instance in which a salesman failed to make a sale with you, telling the reason why.

(7) Generally concreteness arouses interest. Prepare a one-minute speech using the specific to heighten interest. Appeal to the eye as well as the ear. Use at least one other factor of interestingness in addition to the concrete.

(8) Write out a paragraph of 100 words for impressiveness—to arouse emotion. Make each word count. Use-connotative verbs.

(9) An assignment which might not secure good results with students below the college level would ask for a speech attempting to secure action through arousing emotion.

When students have had sufficient experience to feel at home in front of an audience, they may prepare a ten-minute speech on a subject of their own choosing. We have used material collected in the writing up of a special problem in research the preceding term. The advantage in doing that lies in the fact that they have material and may devote their time to the oral presentation—the thing we are studying. The same advantage accrues when students talk out of their own experience; and in a university the cosmopolitanism of a group will add interest to the meetings. In one class a New Englander will talk on cotton spinning, a student from the southwest will discuss the making of Navajo blankets, a student from West Virginia will discuss the making of pottery, a Minnesotan, iron mining, and so forth. Even such a subject as "Courage in Public Speaking" will yield results worth consideration.

When they have worked on a speech of ten minutes duration, the time may be cut to five, and again to three, in order to train them in the art of selection and in the omission of the unimportant.

If the students have not had a problem in research to teach the use of the library in the collection of material, these suggestions will be helpful in reading for a particular group of facts which will be arranged into a detailed outline:

Don't read aimlessly. Before beginning to read, note on a card exactly what you are trying to prove or disprove. Keep it in front of you as you read.

Collect evidence for and against.

Begin to read with the latest work bearing the stamp of best authority. Use "Who's Who" to find author's right to speak. Keep your question in mind. Do not be tempted into byways.

Then read the best authority taking the opposite side of the case or drawing different conclusions.

Compare prefaces, tables of contents, indexes, chapter headings, marginal notes, and summaries to see what the books have on your question.

Continue to examine the facts and inferences of various authorities until you have all the facts on both sides of the question, each carefully noted on its card with exact reference. If note is continued, be sure to repeat heading and exact references on each continuing card.

When enough material is collected, spread the slips on a large table or desk. Then study them to determine the main groups. When this has been done, gather the slips of each group into a pile. Next write on a card for each pile the sentence which expresses the general thought of the slips in that pile.

Take these topic sentences as the main divisions of the speech and arrange them in correct order.

In a similar way sort the slips in each pile. See that all slips are in proper order.

Copy the outline on cards, supplying main headings, if needed, and observing the correct form.

We cannot emphasize too strongly the necessity for having students build their own outlines often. Such work requires both analysis and synthesis and hence provides excellent opportunity for training to study economically and effectively.

When giving the speech from notes, consider these points:

1. Hold the cards in your left hand. There is no necessity for hiding them.
2. Use them only when necessary and for as brief a time as possible.
3. When consulting them, raise them high enough to avoid bending the head.
4. It is best to look at them only between divisions of your talk. Look at the audience while talking.
5. Avoid playing with the cards lest you distract attention from your talk to the awkwardness of what you are doing.

University of Notre Dame,

BURTON CONFREY.

South Bend, Indiana.

CLASSICAL SECTION

The purpose of this section is to act as a bureau of information for teachers of the Classics, and particularly for those of Catholic schools. Any question relating to Latin and Greek will be gladly received, and, in accordance with our ability, promptly considered. This section will aim also to keep its readers informed of the most important movements and events in the world of the Classics, especially such as have bearing on the teaching of Latin and Greek in secondary schools.

An Estimate of Caesar

As Cicero predicted (Pro Marcello 9, 29), posterity has passed various judgments on the great dictator. He has been highly glorified, and as vehemently condemned. Whether we admire him or not, we must acknowledge him as one of the most extraordinary men that ever lived, and one of the most important in the course of human history.

He possessed a clear and powerful intellect, an energetic and tenacious will, brilliant bravery, daring combined with prudence, a marvelous gift of inspiring his soldiers and of winning their unfailing allegiance, in short all those qualities which make a great general. The rapidity of his military operations astonished his adversaries. Yet his activity as a civil administrator during his short dictatorship was no less striking.

Caesar had many high moral qualities. Very frequently he showed clemency toward his adversaries, and revealed a fine generosity, and nobility of soul. However, we cannot admire him without reserve. His private life was to some extent disgraced by shameful vices, and at times, either under the impulse of the moment or for political reasons, he committed acts of injustice and cruelty which are inexcusable.

Whatever else may be said of him, Caesar must be counted among the greatest generals, not only of antiquity but of all time. Napoleon says—and surely he must be considered a good judge: "The principles of the art of war are those which guided the great generals whose mighty exploits have been handed down to us by history: Alexander, Hannibal, Caesar, Gustavus Adolphus, Turenne, Prince Eugene, and Frederick the Great" (Correspondence, ed. in 8°, XXXI, p. 347). Napoleon goes further,

and tells us what these principles are for Caesar. "The principles of Caesar were the same as those of Alexander and Hannibal: to keep his forces united, to be vulnerable at no point, to move against certain important points with rapidity, to have recourse to moral means (i.e., the reputation of his armies, and the fear which he himself inspired), and also to political means to keep his allies loyal, and conquered peoples obedient, to seize every possible opportunity for assuring victory on the field of battle, and for attaining this to have all his troops united at the crucial moment." (*Ibid.*, 353–354.)

The reliability of the *De Bello Gallico* has been confirmed in various ways. Whenever his accounts can be checked by an independent narrative (and this happens rarely), or by excavations, sites of camps, and remains of siege works, etc., we do not find any certain or important divergence. Many writers have tried to prove Caesar unreliable, but all have failed. Others have tried to refashion the story of his campaigns in an effort to give us the exact truth, and they have all fallen into serious improbabilities. Their reconstruction of events has always been found to be incomparably less certain in every way than the narrative of Caesar. On the other hand, it is easy to show that he conceals neither set-backs, nor defeats, nor cruelties, and that he gives full justice to his lieutenants and adversaries.

This does not mean, of course, that we should accept all his assertions at their face value, especially those which are not necessarily complete. He does not disclose to us the motives of his conduct, especially his political motives. And even in a bare recital of facts there is a certain manner of presentation which leaves its impression on the reader.

In general, the same observations apply to Caesar's other work, the *De Bello Civili.* But since politics play a more prominent part in the action of this work, we must be more cautious in accepting Caesar's statements. Military facts are exact and certain, but personal justification occupies more space than in the *Bellum Gallicum.*

Sources: The Commentaries, for the most part, relate events at which Caesar was present, or in which he was the chief actor. They are then, primarily, his own recollections which he communicates to us. However, for the campaigns in which he did not take part—e.g., in those of Labienus—he had to make use of the written or oral reports of his lieutenants. The geographi-

cal and ethnographical information cannot always be guaranteed by the personal experiences of Caesar. He speaks several times of countries which he never visited, and of customs which he could not confirm. He received information from Gallic chieftains, especially Divitiacus, who long lived with him on intimate terms. Moreover, he must have read the works of the Greek geographers (e.g., Eratosthenes, Pytheas, and Posidonius).

(*a*) *Suggested Readings on the Roman Theatre*

Abbott, *Society and Politics*, pp. 100–114.

Fowler, *Social Life*, pp. 304–318.

Friedländer, *Roman Life and Manners under the Early Empire*, vol. II, pp. 90–117.

Jones, *Companion to Roman History*, pp. 370–377.

McDaniel, *Roman Private Life and Its Survivals*, pp. 148–153.

Sandys, Companion to Latin Studies, pp. 513–521.

(*b*) *Suggested Readings on Aqueducts and Water Supply of Rome*

Bailey, *The Legacy of Rome*, pp. 465–472.

Grehland Koner, *The Life of the Greeks and the Romans*, pp. 351–357.

Jones, see above, pp. 144–154.

McDaniel, see above, pp. 20–21.

Platner, *The Topography and Monuments of Ancient Rome*, pp. 90–109.

The following notice will be of interest to all interested in the progress of Latin and allied subjects: Dr. Charles Rockwell Lanman, Professor of Sanskrit in Harvard University, has retired from active teaching, and Dr. Barend Faddegan, Professor of Sanskrit and Indo-European Philology in the University of Amsterdam, is visiting lecturer conducting courses in Sanskrit during the present academic year. A further appointment of interest is that of Prof. Joshua Whatmough, of the Egyptian University at Cairo, as Assistant Professor of Comparative Philology at Harvard University. Two other English scholars of distinction are also visiting lecturers this year at the same institution, Prof. Gilbert Murray, of Oxford University, and President E. E. Sikes, of St. John's College, Cambridge; the

former delivering lectures on Greek topics and guiding the studies of advanced students, while the latter will give courses in classical philology and Latin.

Dean West, of Princeton University, while fully recovered from his recent illness, found that he could not continue to give the large amount of time and energy needed for the presidency of the American Classical League. Accordingly, he notified the Council of the League to this effect. At a largely attended meeting of the Council held on November 6, the future policy of the League and the selection of a new president were fully considered. In view of the gratifying results already achieved and of the favorable prospects for further advances, it was unanimously decided that efforts should be made to secure for the work of the League a permanent endowment so that the gains already made might be increased and strengthened.

At the meeting of the Council, Prof. Ralph V. D. Magoffin, of New York University, was elected president of the League to succeed Dean West. Needless to say, President Magoffin should receive the heartiest cooperation from every friend of classical education. All communications should be addressed to American Classical League, New York University, University Heights, New York City.

The American Academy in Rome announces its annual competitions for the Fellowships in Classical Studies. There is one Fellowship for two years and one Fellowship for one year, each with an annual stipend of $1,250, with residence in the Academy free of charge. There is opportunity for extensive travel, including a trip to Greece. The competitions are open to unmarried men and women who are citizens of the United States. Applications will be received until March first.

Persons who desire to compete for one of these fellowships must fill out a form of application and file it with the Secretary, together with letters of recommendation, not later than March 1. They must submit evidence of attainment in Latin literature, Greek literature, Greek and Roman history and archaeology, and also ability to use German and French. A knowledge of Italian is strongly recommended. They should also submit published or unpublished papers so as to indicate their fitness to undertake special work in Rome.

The Fellows will be selected by a jury of nine eminent scholars without examination other than the submission of the required papers.

For circular and application blank apply to Roscoe Guernsey, Executive Secretary of the Academy, 101 Park Avenue, New York City.

One of the most effective ways of promoting the study of the Classics among our own institutions, and also of dispelling bigotry and spreading a true knowledge of things Catholic among our non-Catholic friends, is to invite the various Classical Associations to which we belong to meet occasionally at our own homes. It was a great pleasure for the writer to have been invited to give the principal address to the Kentucky Classical Association, which held its annual meeting at Nazareth Junior College, Nazareth, Kentucky. The bigotry dispelled, and the general good feeling towards all things Catholic which was instilled, were evident on all sides during the meeting. It also, of course, gave opportunity for a greater number of Catholic teachers than usual to be present and profit by social contact and instruction.

The last number of the *Classical Journal* bears the following notice of a similar meeting: "The annual meeting of the Connecticut Section of the Classical Association of New England was held at the beautiful home of Albertus Magnus College, New Haven, Connecticut, November 6, 1926. The authorities of the college had spared no pains to make the occasion an enjoyable one, and seldom has the Connecticut section been entertained more delightfully. Special credit is due to Dr. Moseley, who presided at the meeting, for his enthusiasm and thoughtfulness."

A new edition of Tenney Frank's "An Economic History of Rome" is now ready at the Johns Hopkins Press, Baltimore, Maryland. This economic history, which has been out of print for five years, has been thoroughly revised, and seven new chapters have been added which carry the story into the fourth century of the empire. There is no other work available in this field.

ROY J. DEFERRARI.

Let us see the suggestions, offered in this section last month, in a more concrete form. We will select our illustration from a class in geometry. The problem, commonly known as the Pythagorean theorem, can be employed to show these suggestions in actual operation. This problem has been assigned, and the pupils know, as a class, that they are expected to show that the square of the hypotenuse of a right-angle triangle is equivalent to the sum of the squares of the other two sides. In the conference period the teacher should carefully ascertain from each pupil if he has a clear grasp of the facts to be proven. This being assured, the teacher should then see that the facts germane to the proof are forthcoming. The following questions are typical of those the teacher should employ during the conference period.

What is the problem? Can you visualize a square on the hypotenuse? If so, draw it for me as I did for the class. Do the same for the other two sides. State the problem in algebraical symbols (AB^2 equals AC^2 plus BC^2). Suppose the given triangle has a base line of 3 inches in length and an altitude of 4 inches, what would the length of the hypotenuse be? This question is an attempt to have the pupil visualize the problem in terms arithmetical. If the pupil can do these things he has grasped the problem to be solved.

In her lesson plan the teacher has given to the pupils as a class the following hints or suggestions, by drawing them in connection with the right-angle triangle given in the problem.

1. A line perpendicular to the hypotenuse and extending from the vertex of the right angle of the triangle given, through the hypotenuse to the opposite side of the square drawn on the hypotenuse.

2. Lines drawn from the vertices of the other two angles in such a way that they will extend to the angles, diagonally opposite, in the squares drawn respectively on the other two legs of the triangle.

3. Similar lines drawn from the right angle of the given triangle to the vertices of the right angles at the other ends of the square drawn on the hypotenuse of the given triangle.

In carrying out the suggestions made in hint No. 1 above, the teacher should ascertain from the pupil the geometric results. A pupil well trained in the principles of geometry will recall these at once; those not so well versed will be obliged to review those theorems where these points were demonstrated.

When the perpendicular is examined in its extension to the opposite side of the square drawn on the hypotenuse of the triangle given, the pupil should be so interrogated that the teacher will be assured that he understands the results thus produced and the reasons for the same. In like manner should one proceed with the other suggestions.

The pupil should then be required to point out the straight angles, the lines equal to each other, the angles equal to each other, the triangles which are congruent and lastly the relations existing between the several squares, triangles and rectangles in the figure, drawn as directed. In each and every case the reasons supporting the answers given by the pupil should be sought for by the teacher. In those cases where these are not forthcoming, the teacher should suggest which of the theorems, already studied, are to be reviewed in order that the facts there demonstrated can be intelligently applied in the problem under study.

By the above procedure the pupil is directed as to which steps to take. The reasons are likewise made clear. It is to be noticed that in each step the pupil is expected to take the initiative by giving his views or answers to the questions put by the teacher. The adequacy or inadequacy of the pupil's ideas is to be evaluated and the necessary improvements provided for by the review or recall of the theorems learned in previous lessons. The pupil in each step is trained to give the main facts, to place the proper stress and to link the findings of the several steps into a more comprehensive unit in order that finally the complete demonstration can be given by him. Through the entire period of consultation the pupil is made to feel that he is the center of activities and the one responsible for its progress.

If examined from the standpoint of the study-process, the above procedure clearly illustrated how the several steps in the process of study are provided for and incorporated. The pupil first sees what has to be done and then begins to gather such

facts as will aid him in the solution required. He first calls on his own acquired mental content and when this is inadequate he seeks information in the textbook or from the teacher. He judges as he gathers from either of these two sources and weaves the materials into a synthesis, which has its concrete expression in the diagram or figure drawn as per directions. Both aspects of his memory as well as his interest and attention are given due regard and recognition. From the very beginning of the period of consultation until its end, the pupil as an individual is the center of operations. He is gradually made to feel the power of his own ideas, their worth in each step, and the growing command or control he is acquiring over the problem before him for solution. This last factor of the study-process may be termed personality and, although last in the list, is first in importance and worth.

After the conference period is closed the pupil is ready and indeed is willing to go to the study-hall to deepen his grasp of the points demonstrated, to reexamine his own ideas and to compare them with those given in the text, both as to language used and strength of proof. To the teacher who thus prepared his pupils for the work to be accomplished in the study-hall can be applied that encomium of praise so succinctly expressed in Dan. xi, 3. To those who neglect to perform this portion of their duty the biting truth of Jer. xii, 11, will be pronounced on them by their graduates.

L. L. MCVAY.

EDUCATIONAL NOTES

THE TEACHING OF RELIGION

Under date of September 8, 1926, the Secretariate of the Sacred Congregation of Seminaries and Universities wrote the following letter to the Bishops of the Church:

For restoring the reign of Jesus Christ our Saviour in the world, nothing is more effective by the very institution of God than extraordinary sanctity and knowledge of the priests. "Grave reasons do indeed at all times and in all ages demand manifold and great virtues of priests, but this our age requires even more numerous and greater virtues." (Leo XIII, Encyclical "Etsi nos," February 15, 1882.)

Since our young students cannot develop into fitting ministers of the altar and zealous pastors of souls, unless within the sacred precincts of the seminary they are properly instructed in all the virtues and sciences, the Apostolic See has published most wise laws for these institutes on whose status the welfare of the Church itself to a great extent depends.

We do, indeed, trust that all regulations which have been made concerning seminaries are being faithfully observed, but there is one matter of the greatest moment and importance which we desire the bishops faithfully to attend to, namely, *the manner and method of teaching Christian doctrine.*

In Canon 1365, Paragraph 3, the Code of Canon Law prescribes that the course of theology should last for at least four complete years, and that "there should be lectures given on pastoral theology, together with practical exercises especially on the manner of teaching catechism to children and others."

How appropriate and necessary these precepts are can be readily understood when one reflects that the office of instructing the Christian people to which all priests, especially the pastors, are obliged, is their first and greatest duty, for on its fulfilment or neglect depends to a great extent that salvation or the ruin of souls. The following well-known and most solemn words of the scholarly Pontiff, Benedict XIV, are to the point: "This we assert, that the great majority of those who are condemned to everlasting punishment suffer that perpetual torture because of their ignorance of those mysteries of the faith which one must necessarily know and believe to attain salvation" (*Inst.*, XXVI, 18).

Wherefore, by precept of Canon Law, the pastor is in virtue of his office under a most solemn obligation to give to his people catechetical instruction, to prepare the children for the proper

reception of the Sacraments of Penance, Confirmation and the Eucharist, and to give them more complete and perfect instruction after they have received First Holy Communion. He has, moreover, the obligation of teaching catechism to the adult Catholics, adapting his language to their mental capacity (Canons 1329–32).

That this duty rests also with the other priests and even inferior clerics, is certain from the following: "The priests and other clerics, provided they are not prevented by some legitimate impediment, shall assist their own pastor in this most sacred task, and may be made to comply with this duty by the Ordinary under threat of penalties" (Canon 1333, par. 2). Because instruction on the highest things, especially when imparted to uneducated and ignorant persons, is both a very difficult and very necessary task, a long and very careful preparation must be made for so important a duty. This preparation must be made in the sacred seminaries, because they are established for that very purpose. In order that one may properly and fruitfully undertake the office of teaching the Christian people, a doctrinal preparation does not suffice—that is to say, a mere knowledge of the truths to be taught, such as is gained by the study of sacred theology and especially dogmatic theology; but the art of teaching is also required, by which one learns the manner of imparting the truths. The study of that art must be made by attending classes that deal specially with the subject and by practical exercises.

The words of the Supreme Pontiff, Pope Pius X, in his Encyclical "Acerbo nimis" (April 15, 1905), are pertinent here: "It is far easier to find an orator of eloquence and elegance of speech than to find a catechist whose teaching is in every respect praiseworthy. Wherefore, whatever natural aptitude anyone may have for thinking and speaking, let him be firmly convinced that he can never speak on Christian doctrine to the people or to the children with spiritual efficacy, unless he has prepared and qualified himself by much reflection and study. Those clerics certainly deceive themselves who, because of the ignorance and undeveloped mind of the common people, imagine that they need not be very careful in their preparation. On the contrary, the more uneducated one's audience is, the more study and care one must employ to express the most sublime truths—so far above the intelligence of the common people—in such a way as to make them accessible to the minds of the ignorant for whom these truths are equally as necessary as for the learned in order that they may attain eternal happiness."

This being so, we beg the Bishops most earnestly to enforce rigidly this precept of Canon Law, and to see that catechetics are taught intensively in their seminaries. Wherefore, the pro-

fessor of pastoral theology shall lecture frequently on the manner of teaching Christian doctrine, and the clerics must practice teaching—either in the seminary or in churches, as prudence may direct.

Such are the thoughts which we desired to communicate to the Bishops on the subject. We wish to conclude our letter with the words which the Supreme Pontiff, Pope Leo XIII (Brief, "Inter graves," May 1, 1894), spoke in a similar case to the Bishops of Peru: "If you do this, the clergy shall be honored, and the Church, which has always been and rightly should be considered as the promoter and supporter of the best studies, shall be exalted thereby. Besides, you will have in readiness qualified men who, when made cooperators with you in the sacred ministry, shall be highly useful helpers in the education of the people and in training them to piety" (Secretariate of the Sacred Congregation of Seminaries and Universities, September 8, 1926; *Acta Ap. Sedis*, XVIII, 453–555).

From its inception the Catholic University of America has been deeply conscious of its obligation to prepare teachers of religion. The great work inaugurated by Monsignor Pace and the late Dr. Shields has been going steadily forward. The establishment five years ago of the Thomas Edward Shields Memorial School has offered the Department of Education an opportunity to test theory in the crucible of classroom experience. The aim of the school is to work out a curriculum in religion for Catholic schools, and to apply scientific pedagogy to the teaching of religion.

REVIEWS AND NOTICES

EDUCATIONAL PERIODICALS

Administration

"Transfers in the Public Schools: The Effect of Transfer on School Progress." Morris J. Selis, *The Elementary School Journal*, January, 1927. The frequency of transfer due to the fluidity of urban populations would seem to require the attention of administrators. As a means of helping children who transfer, the writer suggests a uniformity of textbooks and methods together with better timing of the course of study. Unnecessary transfers should be discouraged and, where necessary, should be withheld until the end of the term.

Methods of Teaching

"English Teaching Faces the Future." Sterling Andrus Leonard, *School and Society*, January 15, 1927. A discussion of the aims and objectives of English teaching which contains some excellent suggestions. The relative claims of fluency and accuracy are discussed and, we might say, each is relegated to its proper place. The demand in the teaching of English, says the writer, is "thought about experience and its organization to meet social needs." English teaching may be made to contribute to the "ethical, esthetic and social salvation of all our pupils."

"Constructive Examinations." John B. Opdycke, *Educational Review*, January, 1927. In this article the teacher in junior or senior high school will find a critical discussion of the whole problem of examinations. While the writer deals particularly with the English examination, his paper contains much that is of interest to the teacher of other subjects also.

"Spirit of Modern Geography Teaching." Edwin H. Reeder, *Teachers College Record*, January, 1927. Emphasizes the advantage of geography taught from the point of view of causal relationships and shows the shortcomings of the memorization methods which are inseparable from descriptive presentation.

"Modern School Geography: Its Nature, Aims and Relationships." DeForest Stull, *Teachers College Record*, January, 1927. Develops the function geography performs in the educational process and shows its interrelation with other school subjects. Good bibliography.

"A Survey of Library Work in a Platoon School." Ruth E.

Norris, *The Elementary School Journal*, January, 1927. Four years' experience with the library in a platoon school, where children from the third to the seventh grades spend one thirty-minute period in the library each day, has demonstrated to the writer the value of the library as a means of training elementary school children.

"Children's Magazine Reading." Miriam B. Huber and Claude S. Chappelear, *The Journal of Educational Method*, December, 1926. A survey of the magazine preferences of public school children in Jersey City, New Jersey, Trenton, New Jersey, Mamaroneck, New York, and Milwaukee, Wisconsin, reveals the fact that a great amount of cheap and salacious literature comes into the hands of school children. The question is raised as to whether or not the school has the responsibility of providing experience in reading worth-while magazines as a means of developing nobler tastes.

"Vitalized History Teaching." Sister M. Bernadette, O.S.W., *Catholic School Interests*, January, 1927. Describes various devices such as correlation, creating atmosphere, pictures, clippings, historical roll-call, etc., which aid in making history a live study.

"The Montessori Method on a Large Scale." Mortimer Standing, *The Sower*, January, 1927. A very interesting and detailed description of a visit to the infant department of a large school in the city of London, which is organized on the principles of Dr. Montessori.

"Objective Examinations of Recognition Type." Rev. P. Henry Matimore, S.T.D., *Catholic School Interests*, January, 1927. Develops the value of the recognition type of examination and gives examples of the uses of its various forms in teaching Bible history.

"Control of Emotional Impulses through Dramatization." Claire T. Zyve and Viola M. Powell, *The Journal of Educational Method*, December, 1926. Describes the utilization of dramatic children's plays with a third-grade group, with special emphasis on the control of the emotional reaction that eventuated.

Principles of Education

"Creative Education in the School." Henry Fairfield Osborn, *School and Society*, January 15, 1927. Starting with the story of the "self-discovery" of J. Reid Moir, a famous archaeologist,

Mr. Osborn contrasts primitive and modern intelligence, particularly with regard to the daily use of inborn talent. According to his opinion, the modern suffers by the comparison. He has become the slave of imitation. This is the basis of his plea that the school and other educative agencies help along the creative spirit of human intelligence which the conditions of modern life tend to dull.

"Don't Swallow Progressive Education without Inspection." Henry Harap, *Educational Review*, January, 1926. According to this writer, new schemes of education are to be viewed in the light of "our basic knowledge of social needs, the nature of the child and the nature of the learning process. No program can ignore these established principles, whatever it may claim to do in the line of developing freedom, truth, and individuality.

"Religious Education in New York." Emily J. Werner, *Educational Review*, January, 1927. A continuation of the writer's study begun in the December issue. Miss Werner describes the various attempts being made in New York City to supply the defect of religious training in the public schools. The study is interesting as showing the growing recognition of the need of religious instruction. The efforts of these organizations are certainly commendable, but one is rather surprised to read that in one of these schools Catholic children are in the majority!

"Immoral Education." Edward O. Sisson, *Educational Review*, January, 1927. Under this rather startling title the writer discusses certain powerful educative forces, including the press and the movies, that have an undesirable effect upon the moral development of children and, indirectly, upon the moral life of all of us.

College and High School

"The University as a Training School for College and University Teachers." V. T. Thayer, *School and Society*, December 25, 1926. The author calls attention to the well-nigh impassable gulf separating teacher and student in college and suggests a program that might be followed by our universities in the training of men and women for college teaching. To meet this recognized need the university can make use of instrumentalities that already exist. The article offers some suggestions toward the solution of the rival claims of research and teaching in the university.

"How Shall We Instruct the College Freshman in the Use of the College Library?" Ada Jeannette English, *School and Society*, December 25, 1926. The writer stresses the need of instruction in the use of the library and gives a summary of the practice in ninety-two colleges which she questioned on the matter.

"College Credit for Courses in Social Science." William E. Linglebach, *School and Society*, December 25, 1926. This report of a Committee of the Association of History Teachers of the Middle States and Maryland recommends that the colleges give one unit of credit for any one of four suggested combinations of social studies. In addition, it outlines the subject matter that should be included in the courses of Economics, Government and Sociology.

"Factors in the Achievement of College Freshmen." Robt. M. Bear, *School and Society*, December 25, 1926. A study of ninety-four freshmen at Center College showing the correlations between test scores, academic standing at close of semester and a number of variable factors such as fathers' occupations, vocational purpose, participation in athletics, age and part of country from which students came.

"Statistics of American Universities." Raymond Walters, *School and Society*, January 8, 1927. The author presents striking figures to show the steady growth of American colleges and universities. In addition to the general statistics, the article sums up the expansion and development of different types of professional schools and the various departments in the universities.

"Tools of Research Needed in the Preparation of Dissertations for the Doctorate in Education." James C. Bay, *School and Society*, January 8, 1927. The writer shows the trend away from the hard and fixed regulation concerning acquaintance with German and French and notes how universities are beginning to require familiarity with the "tools" that are actually needed in the preparation of the student's dissertation.

An Introduction to Biology, by Alfred C. Kinsey. Philadelphia: J. B. Lippincott Company, 1926. Pp. 558.

The several texts in High School Biology already on the market offer such a variety of treatments that it should not be very

difficult for the teacher to select the particular type of course that he considers best adapted to the needs of the class he is instructing. If he has not found just what he is looking for, he will be interested in the somewhat novel presentation of the subject that characterizes Dr. Kinsey's "Introduction to Biology."

The subject-matter of this text is organized about the seven subsciences of biology, viz., taxonomy, morphology, physiology, genetics, ecology, distribution and behavior. This scheme has been made the groundwork for the presentation of general principles which, as occasion offers, are illustrated by specific instances. The aim is to give the pupil a general view of the field of biology and to introduce him to the scientific method of studying life phenomena. The economic, aesthetic and cultural values of the subject are given proper emphasis, but the scientific attitude may be said to be the dominating note of the author's treatment.

There are many excellent features in the text in addition to the division of subject-matter. Biology is considered as a unit, and life processes are explained as they occur in both plants and animals. The advantage of this procedure is to give the pupil a unified view of life that is impossible if the subject is divided into botany and zoology, as is so often done. The questions at the end of each chapter are so formulated as to compel the pupil to use his own thinking in the application of the knowledge he has obtained. There are, in all, four hundred and thirty illustrations which are exceptionally well chosen.

Despite these merits, however, the book has certain defects, or perhaps they should be called drawbacks, that are apt to hinder its general acceptance as a high school text. In the first place, the course will necessitate a laboratory manual and it will not be an easy matter to devise a satisfactory one. The ordinary type of manual will not suffice. To meet the purposes of the course a great deal of field work will be necessary and the manual will have to provide for this. Even then it is doubtful whether teachers will be able to give the time to this phase of the work, no matter how willing they may be.

Secondly, in the opinion of the reviewer, some of the matter will be "over the heads" of the pupils. This is particularly true of the sections dealing with heredity, evolution and genetics. Moreover, some of the chapters deal with topics that are of in-

terest to the specialist or the hobbyist only. The author, it is true, suggests that some of these may be omitted without breaking the continuity of the course, but a better plan would have been to condense them considerably.

Finally, there are several statements in the book that can hardly be said to be supported by scientific evidence. The explanation of instinct as a chain of reflexes is an instance; the presence of gills in the human embryo (p. 120) is another. The use of the term "evolution" on p. 196 is certainly not scientific; while the extension of the term "epidemic" in Chapter XXIII is unusual, to say the least. There are several matters of minor importance concerning which the author's statements are at variance with what one ordinarily reads, but the reviewer does not feel qualified to make any assertions concerning their accuracy or lack of the same. EDWARD B. JORDAN.

The Path of the Gopatis, by Zilpha Carruthers. Chicago: National Dairy Council, 1926. Pp. 100. Price, in board covers, $0.60.

The objective of health literature should be to furnish knowledge and inspire action. Much of that brought out in the last few years has been of the informational type, largely in the form of texts, good in themselves, but necessarily limited in their appeal. A book which goes a step beyond, which supplies health facts, but in the setting of a charmingly written, fascinating tale of courage and progress, which raises it to a literary plane, is the *Path of the Gopatis* from the pen of Zilpha Carruthers, winner of the Pulitzer prize for the best newspaper writing in 1921. Its strange name is due to its historical setting. "Lord of the Cows" was the title given by the ancients to the man who owned and cared for the cattle. He was at once priest, king, warrior, and leader and in their language called "Gopatis."

The book is really a history of dairying from the beginning of civilization to the present time. Based on an exhaustive investigation, carried on by the National Dairy Council, of historic and symbolic records relating to the dairy cow and the part it has taken in the progress of the human race from the earliest ages, it contains a wealth of historic material, authentic as well as interesting. There is the relation of their herds and their use of dairy products to the lives, language and religion of such ancient peo-

ples as the Lake Dwellers of the New Stone Age, the Hindus and the Brahmins of India, the Jews of Abraham, the Egyptians of the Pharaohs, the tribes of Arabia, the Tibet, Mesopotamia and other localities down through history to man today—in short, the story of five thousand years of pushing forward toward the universal use of milk. Coupled with this historical tale is the present-day scientific information regarding the importance of milk in a diet for health, and the importance of sanitation and refrigeration in modern dairying.

It contains chapters on the analysis of the food value of milk, explaining in detail the elements it contains, their sources and their uses in the development and growth of the human body. Several examples are cited which vividly illustrate the importance of milk in the diet of not only the child but also the adult. Certified milk, pasteurization, butterfat and condensed, evaporated and powdered milk are among the topics discussed to the illumination of the reader. It closes with a chapter on the production of milk and its distribution. The book is charmingly illustrated with silhouettes illustrating practices in this industry from the dawn of history.

"The Path of the Gopatis" was prepared to meet the demand for authoritative health material which would at the same time be sufficiently interesting to appeal to young people. It will prove invaluable to high school students in their health study, especially where this is correlated with other studies, as English or History. Most of the information is of the type not readily available in other books, and for this reason, as well as because of the author's charming style and her delightful use of ancient folk-lore, it will prove interesting as a reference book or for pure enjoyment. It should appeal to adults as well as those of high school age.

MARY E. SPENCER.

Books Received

Textbooks

Buswell, Guy Thomas, and Wheeler, William H.: *The Silent Reading Hour*, Primary Book. Chicago: Wheeler Publishing Company, 1926. Pp. 30.

Condon, Randall, S. J.:*The Wonderful Tune*, The Atlantic Readers, Book Three, Grade VI. Boston: Little, Brown and Company, 1926. Pp. xxv+340. Price, 85 cents.

Cook, Albert S., and Tinker, Chauncey B.: *Select Translations from Old English Poetry.* Boston: Ginn and Company, 1926. Pp. xi+195. Price, $1.48.

Cross, Donzella: *Music Stories for Girls and Boys.* Boston: Ginn and Company, 1926. Pp. viii+156. Price, 80 cents.

Davies, R. Trevor, M. A., translator and editor: *Documents Illustrating the History of Civilization in Medieval England.* New York: E. P. Dutton and Company, 1926. Pp. x+413. Price, $3.25.

Fairgrieve, James, M.A., and Young, Ernest, B.Sc.: *Human Geography by Grades, Book Six, Europe and the British Isles.* New York: D. Appleton and Company, 1927. Pp. x+479.

Field, Walter Taylor: *The Field Sixth Reader.* Boston: Ginn and Company, 1926. Pp. 464. Price, 92 cents.

Friese, John F.: *Exploring the Manual Arts.* New York: The Century Company, 1926. Pp. xi+412. Price, $2.25.

Galdos, Benito Perez: *Zaragoza,* edited by John Van Horne. Boston: Ginn and Company, 1926. Pp. xxvi+287. Price, $1.00.

Giddings, Thaddeus P.; Earhart, Will; Baldwin, Ralph L., and Newton, Elbridge W.: *Music Appreciation in the Schoolroom.* Music Education Series. Boston: Ginn and Company, 1926. Pp. vi+557. Price, $2.60.

Gutierrez, Don Antonio Garcia: *El Trovador,* edited by Paul Patrick Rogers. Boston: Ginn and Company, 1926. Pp. xx+165. Price, 75 cents.

Hardy, Marjorie: *Second and Third Grade Manual.* The Child's Own Way Series. Chicago: Wheeler Publishing Company, 1926. Pp. 289.

Hawkes, Herbert E., Ph.D.; Luby, William A., A.M., and Touton, Frank C., Ph.D.: *New Complete School Algebra.* Boston: Ginn and Company, 1926. Pp. viii+625. Price, $1.60.

Hill, E. C., and Dundo, M.: *Contes Dramatiques,* with French Songs, Exercises, Directions for Acting and Vocabulary. Boston: D. C. Heath and Company, 1927. Pp. viii+206. Price, $1.00.

Jackson, J. Hugh, A.B., M.B.A.; Sanders, Thomas Henry M., Ph.D., and Sproul, A. Hugh, M.S.: *Bookkeeping and Business Knowledge.* Boston: Ginn and Company, 1926. Pp. xi+686. Price, $3.12.

Manly, John Matthews: *English Prose and Poetry.* Revised Edition. Boston: Ginn and Company, 1926. Pp. xii+882. Price, $3.20.

Marden, C. Carroll, and Tarr, F. Courtney: *A First Spanish Grammar.* Boston: Ginn and Company, 1926. Pp. xi+300. Price, $1.48.

Matthews, Mary Lockwood, B.S.: *Foods and Cookery,* revised edition. Boston: Little, Brown and Company, 1926. Pp. xii+297. Price, $1.10.

Matthews, Mary Lockwood, B.S.: *Clothing and Textiles,* revised edition. Boston: Brown, Little and Company, 1926. Pp. xii+180. Price, $1.10.

Peattie, Roderick: *College Geography.* Boston: Ginn and Company, 1926. Pp. xii+495.

Perochon, Ernest: *Nene,* edited by Albert Schinz, Contemporary France in Literature. Boston: Ginn and Company, 1926. Pp. xlii+240. Price, $1.48.

Russell, Henry Norris, Ph.D., D.Sc.; Dugan, Raymond Smith, Ph.D., and Stewart, John Quincy, Ph.D.: *Astronomy, A Revision of Young's Manual of Astronomy.* Boston: Ginn and Company, 1926. Pp. xi+470+xxi.

Simpson, Emma L.: *Five Easy French Plays.* Boston: Ginn and Company, 1926. Pp. iv+172. Price, 80 cents.

Smedley, Eva A., and Olsen, Martha C.: *The New Primer.* Chicago: Hall & McCreary Company, 1926. Pp. x+551. Price, $3.50.

Spink, Josette Eugene, and Millis, Violet: *Colette et Ses Frères.* Boston: Ginn and Company, 1926. Pp. vi+182. Price, $1.08.

Stevenson, Robert Louis: *The Black Arrow,* edited by Dorothy Loomis Holm. Boston: Allyn and Bacon, 1926. Pp. vi+436. Price, 80 cents.

Taylor, Lloyd W.: Watson, William W., and Howe, Carl E.: *General Physics for the Laboratory.* Boston: Ginn and Company, 1926. Pp. vi+247. Price, $2.40.

Trilling, Mabel B., A.M., and William, Florence, A.M.: *A Girl's Problems in Home Economics.* Philadelphia: J. B. Lippincott Company, 1926. Pp. 314.

Valdes, Don Armado Palacio: *Marta Y Maria,* edited by H. M. Martin. Boston: Ginn and Company, 1926. Pp. xv+316. Price, $1.12.

Vinal, William Gould: *Nature Guiding.* Ithaca, N. Y.: The Comstock Publishing Company, 1926. Pp. x+551. Price, $3.50.

White, Stewart Edward: *Daniel Boone,* edited by Helen E. Hawkins. Boston: Allyn and Bacon, 1926. Pp. xi+320. Price, 80 cents.

Wilson, Richard: *Precis, Notes and Summaries.* London: Thomas Nelson and Sons, 1925. Pp. viii+185.

Ybarra Alejandro: *Metodo Practico,* a Course in Spanish Conversation, edited by Alfredo Elias. Boston: D. C. Heath, 1926. Pp. x+326. Price, $1.48.

General

Blanton, Smiley, B.S., M.D., and Blanton, Margaret Gray: *Child Guidance.* New York: The Century Company, 1927. Pp. xviii+301. Price, $2.25.

Book, William F.: *Learning How to Study and Work Effectively.* Boston: Ginn and Company, 1926. Pp. xviii+475. Price, $1.96.

Coleman, Caryl: *The Little Flower Treasury;* a prayer-book for all occasions. New York: Benziger Brothers, 1926. Pp. xi+212.

Gallen, P. H.: *How Popes Are Chosen and Other Essays.* Boston: The Stratford Company, 1927. Pp. 144.

Garesché, Edward F., S.J.: *Training for Life.* New York: P. J. Kenedy & Sons, 1926. Pp. 145. Price, $1.75.

Hillman, Mary V.: *In the Jersey Hills.* New York: P. J. Kenedy & Sons, 1926. Pp. v+307.

Hollis, A. P.: *Motion Pictures for Instruction.* New York: The Century Company, 1926. Pp. xvii+450.

Hough, Emerson: *The Covered Wagon.* New York: D. Appleton and Company, 1926. Pp. xvi+386.

Jones, Arthur J.: *Education and the Individual.* New York: The Century Company, 1926. Pp. xiv+225. Price, $2.00.

Leibell, J. F.: *Readings in Ethics.* Chicago: Loyola University Press, 1926. Pp. xiv+1090.

McAstocker, David P., S.J.: *Current Catholic Verse, An Anthology.* Chicago: Scott, Foresman and Company, 1926. Pp. 143.

Nau, Rt. Rev. Louis, S.T.D.: *Readings on Fundamental Moral Theology.* New York: Frederick Pustet Company, Inc., 1926. Pp. 109.

Paraclita, Sister M.: *Convent Echoes,* Devotional Verses. New York: Benziger Brothers, 1926. Pp. 86. Price, $1.00.

Paula, Sister Marie, Ph.D.: *Living for God.* New York: Benziger Brothers, 1926. Pp. 146. Price, $1.50.

Reisinger, F.; Poland, E., and Wagner, R.: *The Culture of Ancient Greece and Rome.* Boston: Little, Brown and Company, 1926. Pp. 335.

Reuter, Rev. Frederick A.: *An Angel of Mercy, A Book of Short Prayers for Catholic Nurses.* Cleveland: John W. Winterick, 1926. Pp. 241. Price, $1.00.

Schmidt, Max: *The Primitive Races of Mankind,* translated by Rev. A. K. Dallas, M.A. Boston: Little, Brown and Company, 1926. Pp. 360.

Scott, Martin J., S.J.: *Religion and Common Sense.* New York: P. J. Kenedy & Sons, 1926. Pp. 320. Price, $1.50.

Specking, Inez: *Martha Jane at College.* New York: Benziger Brothers, 1926. Pp. 183. Price, $1.25.

Quirck, Rev. Charles, S.J.: *Sails on the Horizon.* Boston: The Stratford Company, 1926. Pp. 44. Price, $1.00.

Williams, Archibald: *Conquering the Air.* New York: Thomas Nelson and Sons, 1926. Pp. 315.

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The National Association of Audubon Societies: *Educational Leaflets.* New York, 1974 Broadway.

United States Department of the Interior: *Annual Report of the Commissioner of Education* for the year ended June, 1926.

Bureau of Education Publications: Bulletin 1926, No. 6, Ganders, Harry S.: *Personnel and Organization of Schools in the Small Cities.* Bulletin 1926, No. 15; *Record of Current Educational Publications.* Bulletin 1926, No. 11; Zook, George F., *Residence and Migration of University and College Students.* Bulletin 1926, No. 9; *Statistics of Public, Society and School Libraries,* 1923. Bulletin 1926, No. 14; *Statistics of Private, Commercial and Business Schools,* 1924–1925. Bulletin 1926, No. 18; *Survey of Education in Utah.* Physical Education Series, No. 7; Ready, Marie M., *The Organized Summer Camp.* School Health Series, No. 12; Rogers, James Frederick, M.D.; *The Health of the Teacher.*